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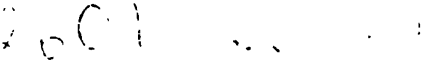
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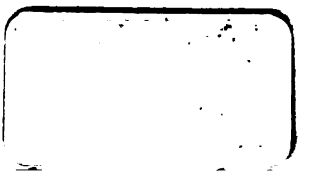
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A GUIDE TO DEGREES

IN

ARTS, SCIENCE, LITERATURE, LAW, MUSIC, AND DIVINITY,

IN THE UNITED KINGDOM, THE COLONIES, THE CONTINENT AND THE UNITED STATES.

By EDWIN WOOTON

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PREFACE.

THIS work is intended to serve as a Guide primarily to Graduation in all Faculties, excepting that of Medicine, both at home and abroad; and secondarily to the acquisition of learned distinctions other than degrees proper.

Owing to the great number of Universities extant it would be impossible in a compendious volume to deal with all these and yet to give such information concerning each as would be of genuine service to the aspirant for a Degree; hence I have made a selection from these bodies. In this latter process I have been guided by many reasons. First, the necessity of supplying full information regarding our home Universities, for the benefit of students of all nationalities; secondly, the advantage of giving such particulars concerning the chief Colonial and United States Universities as might be useful to intending emigrants. With regard to the Continent of Europe, I have had in view the requirements of Englishmen, Colonists, and Americans seeking Degrees from Universities possessing the merits of standing and cheapness.

As educating bodies the German Universities are the least expensive in Europe, but as they do not insist on residence, I have not thought it essential to give information concerning the curriculum and course fees. Full particulars of this nature can be obtained from the University Registrars.

I have to acknowledge with thanks the courtesy of the various Universities in sending me information, and more especially that of

the home Universities, from whose Calendars I have been permitted to make extracts. To the Clarendon Press I am indebted for the particulars I give concerning the University of Oxford, the information being taken from "The Student's Handbook," published by that body.

The particular books and subjects of examination prescribed by the Universities and Colleges are liable to frequent change.

The information under these headings given in the following pages must therefore be considered as exemplary, indicating the general range and standard of the examinational tests concerned.

EDWIN WOOTON.

April, 1883.

INTRODUCTION.

A DEGREE is an officially recognised gradus or step in one or more branches of learning; such official recognition being manifested by the bestowal of a title on the person by whom the step has been made. Of the titles bestowed three are distinguished by their very general use and antiquity. These are the *Bachelorship*, the *Mastership* and the *Doctorate*. Other titles have been introduced, as that of Graduate and Associate, but these are granted by but comparatively few bodies.

A degree may be held to be any title so styled, conferred by any legally recognised authority, and intended to distinguish it as a mark of attainments on the part of its recipient superior to those required for a diploma. At the same time, it is possible that such recognition may be peculiar to the authority issuing the degree, and that it may be more easily obtained than a collegiate diploma, although the college may not be empowered to grant any title and style it "degree," or to grant such titles as those to which the term "degree" is usually applied.

Graduation is, according to rule, effected at an institution devoted to this and kindred purposes, but in many countries there are certain high official personages who possess the privilege of granting degrees.

In the United Kingdom, degrees—excepting those in one branch of learning—are granted by universities only. The exception alluded to is to be found in that department of knowledge termed Theology or Divinity, in which degrees are also granted by certain colleges.

An *university* is an institution empowered, unless restricted in its charter, to bestow degrees in all branches of knowledge. These latter are clasified into certain divisions or FACULTIES, and of these the most generally established at the universities are—Theology, Medicine, Law, and Arts.

A *college* when independent of an university is, in this Kingdom, an institution devoted to some one faculty; or it may be specially chartered to educate as an university. In such case, however, it does not grant degrees, and the charter confers a certain prestige merely on the certificates of competency which the college may bestow on its students.

A *diploma* is any Licence, Certificate of Membership or Fellowship of an institution, or certificate of proficiency in a branch of learning, and declared to be a diploma by the body issuing it. It may be granted by any university, college or other institution; its legality and value will depend entirely on the subject to which it has reference, and the privileges of the institution by which it has been given. Thus a diploma in Arts, Music, Science, Theology, Midwifery, &c., may be granted by an unchartered body, and the estimation in which it is held will depend entirely on the character of, and the attainments required by, the institution concerned. The recipient of such document will not, however, become possessed in consequence of any legal privilege, since the fact of such diplomas being permitted to be issued by mere voluntary unchartered bodies is in its turn dependent on the circumstance that the professions and branches of learning which I have mentioned are unprotected, and may be practised by any person without any diploma or certificate whatever.

In the case of Medicine or Surgery the law is very different. It is true that any society may grant certificates of competency in these departments, but, by the imperial law, such documents are qualifications to practice only if they are issued by one of the twenty Chartered Medical Corporations of the United Kingdom. So that a certificate issued, in the subjects mentioned, by any body other than one of these, would be merely a testimonial of value proportionate to the respectability of the institution granting it and the attainments for which it stood warranty, and of service not as an authority to practise, but as a recommendation supplementary to any such authority already obtained; or for the performance of services when a distinct legal authorisation was not deemed a necessity. There is a very general form of diploma termed the *Licence;* this is a permission to practise; but unless this privilege be restricted to persons holding either this or the permission of some other body, the term Licence is absurd. The rank of any diploma is lower than that of a degree in the same faculty, granted by an institution in the same country, and the social advantages accompanying the latter academic distinction may not be otherwise obtainable. There are in this kingdom only two professions for the practice of which it is essential to obtain the permission of some

duly chartered body, and the professions in question are those of Medicine, including the departments of Veterinary Surgery, Pharmacy, and Dentistry; and the Law. With regard to the Medical Profession, it is only in Medicine and Surgery proper that degrees are granted, and such degrees do not confer any greater legal privilege than ordinary collegiate or other diplomas. To exemplify the above remarks: any Licentiate, Member, or Fellow of a medical body may practise Medicine, but, unless such an one possess a Medical degree, he may look in vain for advancement in the higher walks of his profession.

In Surgery the case is somewhat different; the Fellowship of each College of Surgeons being recognised as a full and sufficient qualification for all surgical appointments in the division of the kingdom in which it is granted. Again, with regard to the Church, although certain certificates and diplomas are accepted by the Episcopate as a qualification for Holy Orders, it is seldom indeed that any of the higher ecclesiastical appointments are obtained by non-graduates.

In the profession of Education also, a degree in Arts or some corresponding faculty is of the utmost service.

Educational institutions, both universities and colleges, may be divided into two classes, the residential and the non-residential. The former give instruction, whatever their other privileges may be; the latter confine themselves to conducting examinations and granting such academical distinctions as they may be legally empowered to confer.

Of degrees there are two great varieties, those granted (*a*) *in absentia* and (*b*) *in præsentia*.

Degrees in Absentia.—Any degree granted in the candidate's absence would be so entitled. This variety may be sub-divided into three classes: (1) Those granted on account of writings and investigations in a particular branch of learning; (2) those granted on account of equivalent examinations (really admission *ad eundem gradum*); (3) those granted as titles of honour merely. The highest and most honourable form in which it is possible to confer a degree is that distinguishing the first of these classes. The bestowal of such title is the recognition by the University of such ability on the part of the recipient that any test is unnecessary. The method of procedure in the case of the second-mentioned class is in principle nothing else than admission *ad eundem gradum*, although there may have been no title bestowed after the equivalent examinations referred to.

Degrees in Præsentia.—Any degree bestowed on the candidate in person would be so classified. All degrees issued in the ordinary course after examination naturally place themselves under this designation.

From what has been said it will be clearly understood that, while the various kinds of degrees of which I have spoken as being granted *in absentia* are usually given in the candidate's absence, yet they may be bestowed on the candidate in person, becoming degrees *in præsentia*, without the institution of any further test of merit.

Admission *ad eundem gradum* is, strictly speaking, that which the term literally signifies—the reception of a person to a certain academical standing in one University corresponding to that which he may have already obtained in another body of like character.

I have purposely avoided using the term "Honorary" to distinguish degrees granted without examination, since it is misleading.

There are certain titles, such as the *Doctorate in Laws* and the *Doctorate of Civil Law*, bestowed by universities as a mark of honour, independent of any recognition of its recipient's ability in the faculty concerned. These degrees are termed "Honorary"; and the designation is sufficiently accurate. It is not right, however, that degrees granted on account of original research or other work, or in recognition of similar titles already obtained, and which are therefore practical testimonials of ability in the departments of knowledge to which they have reference, should be confounded with mere empty titles.

The "bogus" degree deserves a special place of dishonour all to itself, and it shall have it. A "bogus" degree is a fraud, an imitation, a mere counterfeit. It may be forged, or claim to have issued from some university which is non-existent, or it may be improperly granted, and without due authority, by some official of a legally-constituted university. In any case, its worth may be estimated at about that of a patent of baronetcy, manufactured on his own responsibility by some enterprising law writer. It is as dishonest to use a title implying an acquaintance with certain departments of knowledge, when no such learning may be possessed, as it is to utter a lie on the subject. The value of any sham academical title can rest only on its being confounded with others of genuine character, for obtaining which it is necessary to possess high personal attainments. So that it is a mere counterfeit, and its intrinsic worth *nil*. At the present time degrees are being manufactured in London, Birmingham, and other places, and sold to the public as emanating from recognised foreign universities. It would be difficult to say for how long this practice has been carried on. The minimum period might safely be fixed at a century and a half. Beside this external and foreign forging of documents, there is in existence another system to which I have alluded, not less dishonest, but more difficult of detection. The venality of certain university

registrars and other officials has resulted in their issuing signed and sealed degrees to foreign applicants without any authority from the Universities with which they were connected. It has been very seldom that any inquiry has resulted, but when such has been the case, since all correspondence on the subject has generally passed through the hands of the officers concerned, they have been enabled to repress any revelation of their venality.

There is a class of degrees, certainly not genuine rewards of merit, and yet distinct from the purely "bogus," which class has had, until a comparatively recent period, on the Continent and in these islands, a vast number of patrons. I allude to those degrees granted by authority of the University but without any requirements of the candidate save the presentation of a thesis and the payment of fees. Many foreign corporations have carried on this system in order to increase their revenues, and it is to such system that the opprobrium "Sale of degrees" is commonly applied.

I have spoken of Europe generally as having been the seat of this nefarious barter, since the titles were purchased by natives of every country in this quarter of the world; but the seat of production was limited to a comparatively few universities on the Continent. The Governments of the countries in which the universities concerned are situated have succeeded to a very great extent in suppressing this commerce, degrading to seller and purchaser alike. It is true that certain bodies still try to continue the system, but it is impossible for it to survive for any length of time, for the Governments alluded to have threatened that at the first authenticated charge of this nature they will confiscate the charter of the University concerned. Under these circumstances the trade is dispiriting and full of difficulties, rendering honesty in all earnestness "the best policy."

In the United States of America the sale of degrees is maintained to the present day. There are unchartered bodies granting these titles with and without prior examination. There are chartered institutions only too happy to sell spoilt parchment at about 60 dols. the foot, and such venal bodies are not rare, but are to be found in large numbers scattered over the States of the Union. It must be understood that, daring as is this academical prostitution, it is not now carried on without some care and pretence of probity. Impelled by the example of other countries, and by the bad odour in which United States degrees have been held by foreigners, the Legislature are endeavouring to abolish the evil, and many corporations have already forfeited their charters. While speaking of America, it may be mentioned that

the country is peculiar in having a very large number of collegiate bodies which grant degrees. In the United Kingdom this system only obtains in one Faculty—that of Theology.

The chartered academical institutions of the United Kingdom, the great continental bodies, as Paris, Vienna, Berlin, Geneva, and such United States corporations as Harvard, Cincinnati, and Pennsylvania, have never been guilty of the degrading practice of which I have spoken. Notwithstanding, many British degrees and diplomas were, until within a comparatively recent period, very easily obtained; and even now the requirements for some are chiefly limited to the payment of fees. Thus, until within a few years, the Fellowship of the London College of Physicians was bestowed on any medical graduate, whether of a British or foreign University, the consequence being that degrees were frequently bought from some one of the petty venal bodies addicted to this nefarious barter, and the purchasers could then become enrolled as Fellows of the College of Physicians, and practise medicine without any legal restriction. This resulted in another and greater absurdity. According to the constitution of this College, the alumni consisted of two classes: Incorporate alumni, or Fellows and Members, the senior and junior stages respectively of one class, who possessed the privilege of taking part, according to their seniority, &c., in the government of the College, and who were eligible for all official appointments in connection therewith; and, secondly, of Licentiates, whose privileges were strictly limited to the permission given them by the College to practise their profession. For the Licence the College exacted Medical examinations; it had not been considered that university graduates would become candidates for the inferior diploma, and hence no regulation existed for exempting the would-be Licentiate from his examinations on account of his previous graduation at an university. From this it followed that all the Licentiates were duly instructed and examined medical men; whilst many of the Fellows and Members who formed the superior class were "bogus" doctors only. Happily, this anachronism has been swept away.

At the present time, however, the Edinburgh College of Surgeons and the Glasgow Faculty grant their Fellowships to other diplomates of the United Kingdom on the payment of fees. Now this, at first sight, might appear to be merely an application of the principle put in force by those Universities to admit persons *ad eundem gradum*, but there is a distinctive difference. The fellowship of a body is supposed to evince the possession of higher professional attainments on the part of its recipient than were he the possessor of a Licence

merely. This is recognised by the greater number of hospital governing bodies throughout the kingdom, who, as a very general rule, appoint as physicians and surgeons—not mere house officials—fellows of the colleges of that division of the country in which the hospitals are situate.

In the case of physicians the system is not productive of much evil, since practitioners in this branch of the profession can establish no high connection or obtain appointments in public institutions of repute unless they possess the doctorate, and hence any licentiate admitted as a Fellow of the Glasgow Faculty finds himself compelled to secure a degree if he would gain material advantage from the possession of the higher diploma; so that, again, unless such degree be forged, or otherwise fraudulently obtained, it may be assumed that the Fellowship referred to will not be flitted before the eyes of the public as a warrant of attainments he does not possess.

The Doctorate, at the greater number of the universities of the United Kingdom, is merely a receipt for so much money paid, the examinational tests ending with the Bachelorship. Many other degrees are granted in a similar manner.

This is an age of examinations. On every hand written, practical and *viva voce* tests are being introduced. The professions once open are being restricted to persons who have satisfied such requirements. Our "Services" are filled with officers selected at a kind of educational fight, and the examinational fever continues unabated. It is sweepingly asserted by some authorities that there never has been, and never will be any test of ability to equal the examination; that it is perfection; that the best men pass, and that the incompetent—or, in the case of competition, inferior—get rejected. On the other hand, it is maintained that the test is one in name only; that circumstances may influence an examiner's decision, and that learning and ability may not save a candidate from rejection if the examiner misunderstand him, or if the candidate be nervous and lose his presence of mind.

Putting on one side the subject of competitive examinations, with which I have no concern, it is my belief that the examinational system fails chiefly in its lack of elasticity. Where, for the performance of specific duties, a knowledge of a certain range of subjects is necessary, the voluntary candidate for such appointment or such permission should most certainly be tested by examination as to his ability in such subjects. But many professions and appointments comprise in their list of specified or implied duties several, a special aptitude for the performance of one or a few of which might, if recognised, and its

subject or subjects disassociated from the others, secure their advantageous execution.

Under the present examinational system in force in the United Kingdom, such recognition of special aptitude, with one or two very imperfect exceptions, does not obtain. The examining authorities insist on a certain mediocrity of excellence in a wide field of subjects, which there is no necessity for considering as inseparable. Examining bodies conduct their tests as if genius were non-existent, its possessor is shut out in the cold; he finds himself at loggerheads with his judges, and compelled, if he would study his own interest, to drop all original thought, and devote himself to the task of cramming. Hence it is that the brightest lights of Science and Literature are not, as a rule, men who have obtained by examination high academical distinction in their special faculties; they are rather men who have brought to bear on all the subjects they have studied the light of their own intense thought, which very circumstance would militate against their obtaining distinction where stern regulation mediocrity alone is required, and where anything in the shape of original criticism would be considered conceit and presumption. The special aptitude a student may possess for any particular branch of learning is, under the examinational system, cramped and confined. It would be quite possible to endow the system with such elasticity that a special department of study might be prosecuted with a view to graduation. Thus, in Medicine, in order to obtain a qualification, every student is compelled to pass examinational tests in many distinct branches of knowledge, and no allowance is made for those who may be specially fitted for original investigation in, or the practice of, one or other of these, and who would, if afforded a fair chance, become teachers in the departments for which they had a special aptitude.

No university in the United Kingdom will grant a degree in Anatomy, Physiology, or Pathology. These sciences are included under the term Medicine; and he who would obtain a title which may serve as a warrant of his knowledge in these departments of learning must pursue the course of study intended for ordinary practitioners, such pursual necessitating a mere general acquaintance with the particular sciences for which, as I have said, he may possess a special aptitude, and an enforced intimacy with others, for which he has no proclivity, and which will be of no service to him in the particular occupation he designs to follow.

Persons in authority to whom I have spoken on the subject have in many instances given expression to the opinion that if genius or

specially marked talent in any high subject of learning were encouraged and recognised by the university, the result would be a one-sidedness in the education of the student. This statement is too broad and indefinite to be accepted as accurate. If a student were encouraged to acquire a very rudimentary knowledge of the subjects of English education, and were then permitted to plunge into any special study for which he exhibited a preference, to the exclusion of all others, it is true that under the circumstances his education would be incomplete.

It is essential that every man should be fully instructed in all those subjects which are necessary to the prosecution of higher studies. The question arises, then, What are those subjects?

Is it essential for the future Astronomer, Chemist, Geologist, or Physiologist to possess an intimate acquaintance with the Greek and Latin tongues?

Experience and common sense reply in the negative. It is not the general education demanded to which I demur. To any man who would take a rational part in society a knowledge of such subjects as the language and history of his country, Geography, General History, Logic, Algebra, and Arithmetic is essential. I say "such" subjects, for these are mere examples; there are others required in daily life equally important.

But unless the future career of such individual will demand an intimate knowledge of, say, the Classics, it is absurd to compel him to learn that which in his daily life will be of no service whatever.

The value of a learned title is regulated, like the value of any other thing, by the difficulty which lies in its being obtained. It is merely a guarantee of certain attainments, and if it be known that these attainments are required to be high before any such title is granted, then such title is of course held to be a proof of superior attainments.

The value of a degree which can be easily obtained, apart from any privileges it may confer, is entirely dependent on its remaining undistinguished from similar titles granted by other bodies whose requirements are severe. Such degree is the lion's skin thrown over the ass who obtains it. An academical title, in short, is only a sign or emblem of certain possible attainments. Its possession is supposed to have resulted from such attainments, and hence a sham or imitation degree not being readily distinguishable from the genuine article may cause people to attribute to the sham graduate the learning of those whose title his own resembles.

No foreign academical title is recognised in the United Kingdom as conferring any legal privilege. Colonial degrees in Arts and Theology are accepted by some of the Bishops. No colonial degree or diploma in Medicine entitles its holder to practice in the United Kingdom. Certain of our universities and colleges recognise studies made and examinations passed abroad in so far that they will exempt a candidate producing evidence of such from the whole or a portion of the home curriculum, and from examination in one or more of the subjects comprised in their own lists.

The countries of continental Europe refuse to award any legal standing to graduates or diplomates of British or Irish institutions. Medical men of the United Kingdom can practise in these countries only in an unrecognised and illegal manner, unless they first obtain the special recognition of their degree or diploma by the Government of the country in which they may wish to establish themselves.

The Austrian, British, or French medical graduate may have spent years in study; he may have succeeded beyond his hopes, but he has only to quit his country for another to find his honours derided and himself esteemed a quack. This reciprocity of snobbery is not so bad as the one-sided relations between home and colonial medical qualifications. I have pointed out the latter do not entitle their possessors to practise in the United Kingdom, but any medical man registered in this country is permitted to carry on his profession in any portion of the British Empire.

Now, the degrees granted by our colonial bodies are quite as much evidences of ability as those obtained from home universities. And this will become evident by comparing the two classes of institutions, the individual corporations in each class being placed as nearly as possible according to the range and severity of their examinational tests, and the practical or genuine character of their curricula.

Such relative position it is easy to ascertain from the published regulations of the bodies concerned, from their examination papers, and from the percentage of candidates who pass and fail respectively at their examinations.

The injustice does not stop here, for many of our home registered practitioners are merely licentiates of the Apothecaries' Society of London, a body whose professional examinations are notoriously easy to be passed; yet it is such licentiates, and other diplomates whose qualifications stand scarcely higher, who are endowed with privileges denied to those graduates the academical distinctions won by whom are amongst the highest extant, but which, because they were granted by universities situated in some portion of our Empire outside the

United Kingdom, are treated as if they were insufficient guarantees of ability.

That which is urgently wanted throughout the civilised world is the general recognition of all *bonâ fide* degrees and diplomas—an educational reciprocity which shall not be "all on one side." While a certain fixed minimum of excellency is essential, it is not necessary that the latter should be everywhere of an uniform standard, or that in all educational institutions devoted to kindred purposes an identical length of curriculum should be enforced. Elasticity in all these matters is advisable; freedom within boundaries allowing full play for national custom and individual aptitude. Knowledge should be cosmopolitan, not local, and rise superior to the petty unworthy snobbery which would esteem her, not in proportion to her worth, with no reference to her services, but according to the land of her birth.

From what has been said with regard to the value of degrees, it will be evident that facility in their being obtained should not include the educational tests required, or the worth of the degree will be correspondingly small. Many universities differ from each other in the length of the curricula they enforce, in the fees they exact, and the residence they may require. It is in such matters that the student is justified in consulting his own convenience, since they do not influence, except in one particular to be presently referred to, the educational value of the degree. For a man who proposes entering one of the learned professions to select an university on account of the low standard it may require at its examinations is for him to stamp himself as having passed such simple test only, and its only worth, apart from the legal privileges it may confer, lies in the probability of its being confounded with other and more genuine titles.

It is impossible to give advice as to the choice of an university which shall be applicable to all cases. The part of the kingdom in which the candidate may reside, his occupation or freedom during the day, the faculty in which he wishes to graduate, the amount he can afford to spend in effecting graduation—these and other considerations must each have their due weight, and the importance of these separate factors in the argument will only in very few cases be found to tally with those corresponding in others.

Social position is ensured by the possession of an university degree. Every such title granted by an university in the British Empire has its due place in the order of Court precedence. Although foreign degrees, like foreign titles, are not legally recognised in this country, yet they confer, if from universities of high standing, social prestige equal to that accompanying our home academical distinctions,

and they may, by will of the Sovereign, be assigned a definite place in the order of precedence.

For a student wishing to devote his career to academical pursuits no university in the kingdom holds out such advantages as that of Oxford. These include the large number of scholarships at its disposal, and the well-endowed Fellowships which are the reward of industry and perseverance. His chances of preferment at this institution will be enhanced by his taking Anglican orders, and this, in the case of many of the Fellowships, is absolutely essential; but in schools other than that of Theology, and without entering the Ministry, he will possess chances of advancement not to be met with at any other university in the kingdom.

Where residence is possible it should be undergone; there is an advantage to the student in attending the courses of instruction under the very eyes of the men who will afterwards examine him. If he be hard working, his abilities will be appreciated long before he enters the examination room; his character for industry will have become known; he will find himself face to face with examiners whose judgment will be influenced as much by what they have already seen and heard of him as by the answers he may give to the questions they may put. A candidate for a degree from a non-residential university finds himself, on the other hand, in the midst of strangers. Of his previous academical career they know nothing. He may be idle or industrious, clever or dull, a genius or a fool, and their decision will rest entirely on the answers he will give to the few questions put to him. The man of ability may pass, but he is almost as likely to be rejected. Should he be a genius, this possibility becomes probable. The medium man may answer sufficiently well to satisfy his examiners, but the genius, original, and therefore in all likelihood opposed to the examiners on minor points of opinion, will often find himself arguing and defending his own position, or, at all events, introducing ideas with which his examiner does not agree, than which there can be few courses of procedure more fatal to the candidate's chances of passing. But at a residential University all this is changed, although genius is not so recognised that its special direction is encouraged and allowed to replace mediocrity in a number of subjects. However, it is so far appreciated that its eccentricities or peculiarities are considered in their true light, and the examinational test often made more of a formality than a single trial which is to decide the candidate's ability.

There is also this advantage connected with residence at an university—the social training a student receives. All knowledge is

neither of the book nor the laboratory. There is a learning to be acquired only in intercourse with men, and of as great value as any mentioned in the academical syllabus. It is the knowledge of men and manners to be acquired at the residential university and institutions of like nature which will ever render them valuable training institutions for youth. In this respect no university or college can surpass the University of Oxford. Here are gathered together as students and teachers cultured men of cultured families. The refinement of the highest European civilisation is breathed by the undergraduate from the moment he enters its walls. If he seek true mental cultivation his advancement may be rapid, for the materials lie ready on every hand. It is for this reason that in those professions which require their followers to be possessed of all that appertains to the finished gentleman, as in the higher departments of the Church and of education, the Oxford graduate is justly preferred to his brother of London. This would also undoubtedly be the case in the Faculties of Medicine and Science, only that the latter University requires in these two a higher examinational test than does the University of Oxford.

It must be remembered that the relative cost of education at residential universities is not to be estimated solely by the difference in their charges. The personal expenses of the student will vary according to the social usages of the men amongst whom he is thrown. Where, as at Glasgow, Aberdeen, and St. Andrews, the greater number of students are young men of very limited resources, their mode of life is correspondingly inexpensive, and the newcomer may practise economy without rendering himself objectionable. At such Universities as Oxford and Cambridge, although the men naturally divide themselves into cliques, regulated as much by their resources and consequent mode of living as by anything else, and as a consequence the poorer students are to a certain extent thrown together, yet the very presence at the University of a large number of wealthy men influences the general mode of living, including personal dress, and therefore the expenditure of every student who does not mark himself out for ostracism by his refusal or inability to follow the customs of the society in which he is cast.

The advisability of residence for a certain period at a foreign university will depend on the degree sought by the student. If it be his desire to take a home degree in Arts his best course will be to remain in his own country. If, on the other hand, he be a medical student, he will find it of advantage to first pass his examination in Anatomy, Physiology, &c., at the home university or college whose

qualification he wishes to take, and subsequently to spend twelve months at some good foreign clinic, as Vienna or Paris.

The universities of the Continent of Europe are under State control; their decisions may be reversed by the Minister of Education and they may be required to grant a degree contrary to their expressed wish. This is not the case with any academical corporation in the United Kingdom, excepting the Royal University of Ireland, from which, as it is a Government institution, appeals might lie to the Crown. With this exception, all British and Irish universities are independent corporations, and unless they offend against the statute law their proceedings cannot be impugned. Thus, a student or candidate at any such institution cannot appeal from its decision in any matter concerning his examinations unless the university have broken an implied or actual contract with him, when action might be taken in one of the civil courts.

An example may make this plainer: If a student be expelled his university on account of alleged improper conduct, he may, unless he has signed some agreement to the contrary, compel the authorities to refund the fees he may have paid, less any lawful charges which may lie against him up to the period of his quitting the university; and, further, if he could show that the allegations of the university were false, and that his dismissal entailed injury to his reputation, purse, or prospects, he would be entitled to compensation. So if a student, rejected by his examiners, can prove that his rejection was the result of malice and conspiracy, and not of his failure to produce evidence of competency in the subjects in which he may have been examined, he would be distinctly entitled to damages; while, if conspiracy were established, a criminal prosecution might be instituted against the offending examiners. But if a student cannot plead in manner as above, there is no authority in the land, external to the university concerned, empowered to take into consideration any special circumstances he may urge as an excuse for his failure to pass an examination and to reverse a decision at which the examiners have arrived. To effect this by external influence an Act of Parliament would be necessary.

There is no country in the world where education is so expensive as it is in England. The incomes of many professors at the continental bodies amount to less money than that spent annually by the average undergraduate or London student. Putting on one side the cost of living, which is much less on the Continent than at home, the heavy expenditure on this side the Channel arises, not so much from the examination fees as from the class and similar charges. In the

University of France all the courses are free, and fees are charged for the "Inscriptions" only—that is, practically for the diploma or degree sought, and these fees are very small. In Germany a student could undergo an university curriculum and support himself comfortably on one-half the amount he would spend at Oxford, or as a student, say, at a London medical school.

There are certain universities celebrated either for particular branches of learning they teach or for the high standard they exact in special departments at their examinations. Thus, Oxford is esteemed the first university in the kingdom for obtaining instruction in Classics and Anglican Theology, and its standard in these branches of knowledge is proportionately high. The same remarks apply to Cambridge and the subject of Mathematics; and, with respect to the examinational standard, to London and the two Faculties of Science and Medicine.

If a student intend to enter the Ministry of any communion he will do well to attend an university at which the theology of such Church is taught. This, in the case of the Nonconformist bodies, cannot well be done, and the candidate has to content himself with taking a collegiate certificate and a degree from some non-residential university.

The Theological faculties of those United Kingdom universities possessing such are each affiliated to a particular Church. Thus, Oxford, Cambridge, and Durham are distinctly Anglican; Dublin is attached to the Irish Church; the theology of the Roman Catholic University of Ireland is intimated by the title of this body; the Scottish universities are Presbyterian; London, Victoria (Manchester), and the Royal University of Ireland have no theological departments.

Most of the Continental universities possess Theological faculties which are in connection with certain Churches. The German bodies are mostly Protestant; the Italian Universities do not now possess theological faculties; they give instruction, however, in Ecclesiastical History and other comparatively non-polemical subjects. Theology in Spain is taught at separate institutions under the control of the Papal Episcopate.

In the universities of different countries corresponding faculties are variously styled. Thus, the Parisian Faculty of Letters is equivalent in its range of subjects to the German Faculty of Philosophy and the English Faculty of Arts. "Divinity" at Oxford or Cambridge is "Sacred Theology" in the University of Dublin.

In the following pages I have given particulars of a large number of learned societies. These bodies are each devoted to one or more

special branches of knowledge. For the most part they are exclusive, and membership is to be obtained only by those whose recommendations are, in the opinion of the governing officers, such as to justify them in concluding the candidates to be persons of high education and abilities, with especial reference to the objects of the society. The membership of many of these associations is a deservedly esteemed honour. Governed, as these bodies are, by men at the head of the particular departments of knowledge with which they deal, and confined, as membership is, to persons fully conversant with such branch of learning, the fact of having been admitted to any one such society, as made known by the initial letters used by members, is, so far as it extends, as much a guarantee of certain attainments as a degree or diploma from an university or college.

Beside the honour appertaining to membership of these associations, there must be taken into consideration the educational privileges enjoyed by members. They are entitled to attend the society's lectures and meetings, and are thrown, in consequence, into the company of the men best qualified to inform them on the particular subject or subjects which may be the object of the society's care and study. They are kept *en rapport* with the latest discoveries in or development of such subject. If they be workers in the field of study in question, every opportunity is afforded them of bringing their efforts under the notice of those best qualified to judge of their merit. Social position is ensured by the membership of certain of these bodies; but this is influenced by the facility or difficulty with which membership is obtained, and by the circumstance of the society being chartered or otherwise.

If asked to select from these associations those which I considered to be socially pre-eminent, I should give the following: The Royal Society, the Royal Academy, the Royal Institution, the Royal Society of Edinburgh, and the Royal Irish Academy. Certain bodies, such as the Institute of Civil Engineers, although not peculiarly empowered to grant diplomas in the professions with which they deal, are yet considered so thoroughly representative of their highest talent that their membership is a *sine quâ non* with all who would obtain distinction in the particular avocation with which such societies may be connected.

To persons who are neither graduates nor collegiate diplomates, the membership of some learned society is almost essential if they wish to devote themselves to intellectual pursuits. An exception may be found in the case of Literature. In this profession it is the amateur, and not the professional, writers who tend to form associations. The only

institution confined to literary men which may be said to include amongst its members the leading writers of the country is the Savage Club, and this is more akin in its character to such institutions as the Carlton and Army and Navy Clubs, than to a society devoted to the prosecution of a special department of knowledge.

At the time of writing a Bill is before Parliament which, should it become law, will sweep away many of the evils the "Guide to the Medical Profession" exposed, and to which I have referred in the preceding pages.

SECTION I.

THE UNITED KINGDOM.

A GUIDE TO

DEGREES IN ARTS, SCIENCE, &c.

CHAPTER I.

ENGLISH UNIVERSITIES.

Oxford—Cambridge—London—Durham, with the College of Physical Science, Newcastle-upon-Tyne—Victoria (Manchester), with Owens College.

UNIVERSITY OF OXFORD.

THE University of Oxford is a corporation. The colleges of the University are also corporate bodies, but distinct from the University itself. They were founded for the convenience of students studying at the University, and they were endowed for this purpose. The members of or residents at the several colleges consisted of two classes: The senior or Fellows occupied themselves in study and teaching; the junior in study only. Certain of the senior members had the guardianship of the junior, and were hence termed Tutors. The members of the College shared in common the refectory, lodging, and chapel. The system briefly outlined above still obtains with some modifications. A great number of the Fellows do not reside in college, and the latter is not the exclusive right of the members of the foundation. The greater number of the students are admitted to residence upon payment of certain charges.

The "Halls" of the University are neither incorporated nor endowed. They are now as when founded, "institutions in which students live together under the charge of a Principal, who is responsible for both their discipline and their instruction. To several of them exhibitions or scholarships are attached, which are held in trust by the University or other bodies."

Until the year 1855 there had been a rule in force at the University requiring all students to be members of a college or hall, but by a statute passed in 1854 any Master of Arts may, by complying with certain rules, open his house as a private hall for the reception of students, to whom he will act as tutor. There is only one hall at present existing under this regulation (Charsley's Hall).

In 1868 a statute was passed repealing the regulation which required members of the University to be members of a college or hall. Students who take advantage of this statute are allowed to reside in lodgings (licensed), or with their friends. In disciplinary matters they are controlled by "The Delegacy of Students not attached to any college or hall."

By a statute passed in 1871 new colleges or halls affiliated to the University may be recognised as conferring the same privileges, with regard to students, as other colleges or halls. There is one new foundation—Keble College.

All students must graduate in Arts before taking degrees in any other Faculty. The minimum curriculum for the Bachelorship is of about two years and eight months' duration. As a member of a college or hall, a student may with economy graduate in Arts at an expenditure of about £300.

The intending University student should apply to the Head of the College or Hall he has selected, stating his age and name, the name of his parents or guardian, and the date of his approaching entry. Michaelmas term is the most convenient time to enter.

It should, however, be understood that the number of rooms in each college is limited; that there are more students than could possibly find accommodation within the college walls, and that the candidate may have to reside in lodgings until such time as rooms may be allotted him.

None of the colleges are open to women. There are two private establishments at Oxford for boarding lady students, but they have no official connection whatever with the University. Women may enter for the University examinations; if successful they receive certificates recording the circumstance. Degrees are not granted to women.

The individual colleges have in many instances rules which modify or supplement the general regulations mentioned:

University.—A certain number of vacancies are thrown open to competition at the annual Scholarship examination in Lent term. Candidates should apply in the term preceding the one in which they wish to enter.

Balliol.—The candidate must state on application whether he wishes

to reside within or outside the college. He must be fifteen years of age at least.

Merton.—The candidate may apply up to the date of examination.

Queen's.—The candidate should state whether he wishes to reside within the college walls.

New.—The candidate should apply at least a fortnight before the date of examination. A certain number of vacant rooms are given to those who stand best at the examination irrespective of any priority of application. The latter, however, decides the allotment of the remainder of the rooms.

Lincoln.—Applications should be marked "admission" on the envelope. The allotment of rooms is decided as in the preceding case.

Corpus Christi.—Applications may be made until the day of examination. A certain number of rooms are given at the annual Scholarship examination.

Pembroke.—No student is admitted who is a candidate for entrance at another college.

Hertford.—The candidate should send testimonials as to character, &c.

The Halls.—Previous notice is seldom necessary; nevertheless, it is desirable.

Admission.—At *University* applications must be addressed to the "Master"; at *Balliol*, to the "Master"; at *Merton*, to the "Warden"; at *Queen's*, to the "Provost"; at *New College*, to the "Warden"; at *Lincoln*, to the "Rector"; at *Hertford*, to the "Principal," "Dean," or "Senior Tutor." In the case of all colleges, however, letters addressed to the "Master" and marked "Admission" will reach the proper authorities.

Examinations for Admission.—The examination is usually of such a character as to satisfy the authorities of the college or hall that the candidate is likely to pass the examinations which the University requires for its degrees. "And since the examination called 'Responsions' is (with certain exceptions), an indispensable preliminary to all degrees (except degrees in Music), the subjects and standard of the college examinations before admission are usually those of 'Responsions.' Some colleges, however, require a candidate to show that he is likely not only to pass the University examinations, but also to obtain Honours in at least one subject. But all colleges and halls, with the exception of Corpus and Magdalen Colleges, accept the certificate of the Oxford and Cambridge Schools' Examination Board in lieu of this ordinary matriculation examination; in almost all cases, however, there is the proviso that the certificate must be of such a kind as to exempt the holder from 'Responsions,' and in some cases,

most of which are specified below, there is the further proviso that the candidate must have passed with distinction in some one of the subjects of the examination."

Regulations of the Colleges and Halls.

University.—Period of examination, the term previous to commencing residence. *Subjects*: (1) Two Greek plays, *or* one play with Homer, Thucydides, *or* Demosthenes to the same extent; (2) Virgil's Georgics, *or* Æneid (any four books), *or* to the same extent Horace, Livy, Cicero, *or* Tacitus; (3) Translation from English into Latin Prose; (4) Grammar and parsing; (5) The Old Testament, History, and the Gospels; (6) The less usually read passages from the Greek and Latin authors, *erotic*; (7) Euclid, i., ii., and Algebra to simple equations inclusive; (8) The whole of Arithmetic (*e.g.*, Colenso). Candidates may be examined, if they desire it, in any other subject, as: Higher Mathematics, History, Physical Science, Modern Languages.

Balliol.—Period of examination, the commencement of the term preceding residence. *Subjects*: (1) Divinity, including the Greek Gospels; (2) Homer and Thucydides; (3) Virgil, Cicero, *or* Livy (at the Examiners' discretion); (4) English-Latin translation; (5) Greek and Latin Grammar; (6) English Composition; (7) Euclid, i., ii., *or* Algebra, first part; (8) Arithmetic to decimals inclusive. *Optional*: History, Composition in Modern (foreign) Languages, and Higher Mathematics. A knowledge of these will compensate to some extent for non-proficiency in the Classical portions of the examination. The certificate of the Oxford and Cambridge Schools' Examination Board will be accepted in lieu of the above examination, provided that "the candidate has obtained such a certificate as will enable him to pass Responsions, and has passed with distinction in one of the following subjects: Latin, Greek, Mathematics, French, German, English, History, Natural Philosophy, Heat and Chemistry."

Merton.—Periods of examination, the last Wednesday in November, February, and May. *Subjects*: (1) Latin Prose Composition; (2) Translation from Latin into English; (3) Arithmetic; (4) Euclid, i. and ii., or Algebra, first part; (5) *Viva voce* examinations in one Greek and one Latin author. *Books recommended*: Euripides, Hecuba, and Alcestis; Virgil, Æneid, i.—v. The candidate may offer himself for examination in any of the recognised higher subjects of education.

Exeter.—Period of examination, once in each term. *Subjects*: (1) Two Greek plays by the same author. *Books recommended*: Medea and Hecuba of Euripides *or* Sophocles' Œdipus Rex and Antigone; (2)

Odes of Horace (three books) and Ars Poetica. Candidates may by shewing good reason obtain leave to substitute other books; (3) Arithmetic; (4) Euclid, i., ii., *or* Algebra to simple equations inclusive; (5) Latin Prose Composition; (6) Outlines of Scripture History. Candidates may be examined, if they desire, in any of the subjects of higher education.

Oriel.—Period of examination, once in each term, generally in the term previous to commencing residence. *Subjects*: Similar to those required at Responsions, with translations from previously unmentioned Greek and Latin authors.

Queen's.—Period of examination, the term previous to residence. Later supplementary examinations are held on the Thursday previous to commencement of term. *Subjects*: (1) Greek and Latin Grammar; (2) Translations from English into Latin prose; (3) Euripides' Hecuba, and Alcestis; (4) Virgil's Æneid, i., v., *or* equivalent Latin and Greek books, as Cæsar and Xenophon, of each four books; (5) Arithmetic, and Euclid, i., ii., *or* Algebra to simple equations inclusive.

New College.—Periods of examination, May and November. Residence is generally commenced in the following terms, but candidates wishing to offer themselves at once for Responsions may do so. *Subjects*: (1) Divinity, including Greek Gospels (except for those who can claim exemption according to the Statutes of the University from Divinity examinations); (2) The more commonly read Greek and Latin authors, translation into English; (3) Translation from English into Latin prose; (4) Greek and Latin Grammar; (5) Euclid, i. and ii., or Algebra to simple equations inclusive; (6) Arithmetic. *Optional*: (1) Greek and Latin; (2) History; (3) Mathematics; (4) Natural Science; (5) English Composition. Candidates intending to offer themselves in Mathematics must state the extent to which they have studied the subject. Candidates intending to take Natural Science are requested to select Physics, Chemistry, or Physiology. Proficiency in any one of the optional subjects will be accepted as compensation for defective knowledge of the necessary subjects, provided there be reason to believe that the candidate will be able to pass Responsions within the first two terms of his residence. The certificate of the Oxford and Cambridge Schools Examination Board will be accepted, provided it exempt from Responsions, and that one subject has been passed with distinction.

Lincoln.—Periods of examination, first Saturday in each term. *Subjects*: The same as for Responsions.

Magdalen.—Periods of examination, end of each term, and beginning of Michaelmas term. *Subjects*: The same as for Responsions. *Books*

recommended: Hecuba, and Alcestis of Euripides; Odes of Horace, three books; Ars Poetica.

Corpus Christi.—Periods of examination, previous to commencement of Easter and Michaelmas terms. *Subjects*: (1) Translation from English into Latin prose; (2) Translation from Attic Greek—the book not to be previously mentioned; (3) Greek or Latin book selected by the candidate, with parsing and questions on Greek and Latin grammar; (4) Arithmetic; (5) Euclid, i., ii. *or* Algebra to simple equations inclusive. *Optional subjects*: Candidates must give fourteen days' notice of their wish to be examined in these, which are: History, English Composition, Natural Science, and Mathematics. The candidate's proficiency in the subject or subjects selected is taken into account in deciding the result of the examination.

Brasenose.—Periods of examination, end of Michaelmas, Hilary terms, and Whitsun week. *Subjects*: (1) St. Matthew's Gospel, with rudiments of religious knowledge; (2) The Hecuba of Euripides, and *either* Homer's Iliad, book i., *or* the Alcestis of Euripides; (3) Virgil, Georgics i., ii.; (4) Latin writing; (5) Greek and Latin grammar; (6) Arithmetic; (7) Euclid, i., *or* the first part of Algebra.

Christ Church.—Periods of examination, October, and the third week before Commemoration. *Subjects*: (1) Any five consecutive books of the Iliad or of the Odyssey (*recommended*), *or* two plays of Æschylus, Sophocles, or Euripides, *or* some other Greek author to the same extent; (2) Virgil's Æneid, i. to v., *or* Horace, Odes i. to iii., and Ars Poetica, *or* some other Latin author to the same extent; (3) Latin Prose Composition; (4) Greek and Latin grammar; (5) Arithmetic; (6) Euclid, i., ii. (*recommended*), *or* Algebra to simple equations inclusive.

Trinity.—Periods of examination, May for residence, commencing in the October following; November for residence, commencing in January. *Subjects*: (1) Translation from English into Latin Prose; (2) Translation into English of unproposed Greek; (3) Two plays of Sophocles, announced beforehand; (4) Five books of the Æneid, above announced; (5) Arithmetic; (6) Elementary Algebra, *or* Euclid, i., ii. Candidates may substitute other books for subjects 3 and 4.

St. John's.—Periods of examination, commencement of every term, and of the Long Vacation. *Subjects*: (1) Latin Prose composition; (2) Greek and Latin Grammar; (3) Arithmetic; (4) Euclid, i., ii., *or* Elementary Algebra (as for Responsions); (5) The Hecuba and Alcestis of Euripides; (6) The Æneid of Virgil, books i. to v., or equivalents.

Jesus.—Apply to the College authorities for special *dates* of examina-

tion. *Subjects*: (1) Greek and Latin Grammar; (2) Arithmetic; (3) Algebra (Elementary), or Euclid, books i., ii.; (4) Euripides, Hecuba and Medea; Horace, Odes, three books.

Wadham.—One Greek and one Latin author at the candidate's choice, such as: Sophocles, two plays; Euripides, two plays; Homer, five books; Xenophon's Anabasis, four books; Georgics of Virgil; Æneid of Virgil, five books; Odes of Horace, three books, *plus* the Satires, one book, *or* the Epistles; Livy, two books, *or* portions equivalent in extent from other authors; (2) Translation from English into Latin Prose; (3) Greek and Latin Grammar; (4) Arithmetic; (5) Euclid, i., ii., *or* Algebra to simple equations, inclusive.

Pembroke.—*Periods* of examination, the day previous to the beginning of term in which the candidate proposes to commence residence. *Subjects*: As for Responsions.

Worcester.—*Periods* of examination, beginning and end of each term. *Subjects*: (1) Euripides, Alcestis and Hecuba, with parsing and grammar; (2) Cicero, De Amicitia and De Senectute; (3) Translation from English into Latin prose; (4) Arithmetic; (5) Algebra to simple equations inclusive, *or* Euclid, i., ii. *Optional*: English, French, and German.

Keble.—*Period* of examination, October. *Subjects*: (1) Euripides, Hecuba and Medea, *or* Sophocles, Ajax and Electra; (2) Virgil's Georgics, *or* Horace, Odes i. to iii., with Ars Poetica; (3) Euclid *or* Algebra; (4) Arithmetic; (5) Greek and Latin Grammar.

Candidates to whom rooms have been promised receive them in the order in which their names are entered, upon condition of coming up to the College standard in the Matriculation examination; but in exceptional cases persons who have applied too late to receive a promise of rooms are allowed to offer themselves on the chance of being selected by the Warden to fill such extra vacancies as may fall in.

The Oxford and Cambridge Schools Examination certificate is accepted in lieu of the above, provided the candidate has passed in Latin, Greek, and Mathematics, with distinction in one subject. Students who have been placed in the first division of the general list in the Local Examinations will also be exempted.

Hertford.—*Period* of examination, commencement of each term. *Subjects*: (1) Euripides, Hecuba and Medea; (2) Virgil, Georgics; (3) Latin Prose Composition; (4) Latin and Greek Grammar; (5) Arithmetic; (6) Euclid, i., ii. Other Classical authors may be taken instead of those mentioned. The quantity must be not less than that for Responsions. The Oxford and Cambridge Schools Examina-

tion certificate, provided it includes the required subjects, will exempt from the above examination.

The Halls.—Candidates must satisfy the Principal of their educational fitness for *entering* on a University career, but the *subjects* of examination are not fixed.

Most of the Colleges require a candidate to show, at his examination for entrance, that he stands a chance of successfully reading, not for his degree merely, but for Honours: this is the case especially with Balliol, Exeter, and New College.

Re-admission and Migration.

The regulations are:

No person *in statu pupillari* (*i.e.*, who has not taken the degree of M.A., B.C.L., B.M., or one of the superior degrees) whose name has been removed from the books of a college or hall, or from the Register of Unattached Students, can be re-admitted to the same or any other college or hall, or migrate to another college or hall, or become an unattached student, except under the following conditions:

1. If his name has been removed in any other way than that of expulsion, he must produce a certificate, signed by the Proctors, that notice has been received by them of his intention to apply for *leave* to be re-admitted, or to migrate, together with a written permission and written testimonial of good character from the college or hall to which he belongs, or last belonged, or from the Censors of Unattached Students. In case of such permission or testimonial being refused, the Chancellor of the University may, if he think fit, grant his consent in writing for such re-admission or migration.

2. If he has been absent from the University for at least one year, the certificate referred to in the preceding paragraph is dispensed with.

3. If he has been expelled by the authorities of a college or hall, or by the Delegates of Unattached Students, he cannot be re-admitted unless the Chancellor of the University has heard the case, and given his consent in writing for his re-admission.

Unattached Students.

Those desiring to enter the University without being attached to a College or Hall must make application to the Delegates of Unattached Students:

An *examination* for such candidates is held by the Censors at the beginning of each term. *Subjects*: (1) Homer, three books, or one Greek play. *Recommended*: Euripides, Hecuba or Alcestis, or Homer, Odyssey, vi. to viii.; (2) Virgil's Æneid, three books; Horace, Odes, three books; (3) Translation from English into Latin; (4) Greek and Latin Grammar; (5) Arithmetic; (6) Euclid, i., ii., or Algebra, i., ii., simple equations inclusive.

Persons desiring to enter without passing the above examination must produce

satisfactory reasons for their admission to the Censors, and must state the course of study they intend to pursue. The Oxford and Cambridge Schools' certificate exempts from the Matriculation examination.

Intending candidates should make their application by writing to the Censors, at the Old Clarendon Building, Broad-street, Oxford, at least one week before the date of examination.

Matriculation.

When a student has satisfied either of the two sets of requirements mentioned, he is eligible to be presented to the Vice-Chancellor for formal enrolment on the Register (Matricula) of the University. This enrolment, which must take place within a fortnight of his being entered on the books of a college or hall, or of the Delegates of Unattached Students, is called Matriculation. Until it has taken place, a student, although he may be a member of a college or hall, is not a member of the University. At the time appointed, which must be within a fortnight after admission as a member of a college or hall, or in any other capacity, the persons to be matriculated are taken in their proper academical dress to the Vice-Chancellor. They write their names in Latin in a register. They pay the requisite fees. They are then addressed in a short Latin formula by the Vice-Chancellor, and receive from him a certificate of Matriculation, together with a copy of the Statutes of the University. From this time they enjoy all the privileges of undergraduate members of the University, and are at the same time amenable to University discipline.

Residence.

It is imperative that undergraduates reside within the limits of the University. This rule does not apply to candidates for degrees in Music.

Terms.—There are four in each year:

Hilary or Lent—Commencing January 14, ending Saturday before Palm Sunday.

Easter—Commencing Wednesday in Easter Week, ending Friday before Whit-Sunday.

Trinity or October — Commencing Saturday before Whit-Sunday, ending Saturday after first Tuesday in July.

Michaelmas—Commencing October 10, ending December 17.

It is sufficient for an undergraduate to reside for forty-two days (not necessarily consecutive days) in the course of Hilary term, or for the same length of time in the course of Michaelmas term, and for twenty-one days in the course of Easter term, or for the same length of time in the course of Trinity term. In the case of Hilary and Michaelmas terms these days of residence must fall wholly within the term for which residence is counted; a deficiency of even one day out of the forty-two cannot be compensated for by any amount of residence in

another term. But since Easter and Trinity terms have been made continuous, a residence of forty-eight days in the two terms conjointly, in whatever way these days are distributed between the two terms, is accepted as equivalent to a residence of twenty-one days in each term separately.

Terms of residence need not be consecutive; they may, as far as the University is concerned, be distributed over any number of years. Sometimes a break in the regular sequence of terms of residence is caused by illness, and sometimes also students of limited means reside for one or two terms only in the course of a year, occupying the remainder of their time in business or tuition. As the same total number of terms of residence is required from all alike, this latter course postpones the obtaining of a degree; but it should be borne in mind as a possible alternative by those who, for whatever reason, find continuous residence impossible.

Undergraduates must reside either at a college, at a hall, in licensed lodgings, or at some house of which the Delegates on special application approve. Undergraduates who have not attained their majority must, before residing in licensed or unlicensed lodgings, produce the written consent of their parents or guardians. This rule does not apply to those who have resided twelve terms within the University. All undergraduates must, before residing in lodgings, obtain the consent of the Delegates of Lodging Houses; if they be members of a college or hall, they must also obtain the consent of the latter.

These rules are by no means severe in practice. *Men*, since they are supposed to possess judgment, are, as a rule, allowed to reside where they please, and it is an excellent thing for *boys*, that they should find quarters only in houses the authorities know to be respectable.

After twelve terms' residence within college walls, attached students are generally required to move into lodgings. The following are the rules of the several colleges as to place of residence:

University.—Before the completion of *twelve terms'* residence, permission must be obtained to reside in lodgings.

Balliol.—Undergraduates may reside either in college or lodgings.

Merton.—The same regulation obtains.

Exeter.—The same; but lodgings must be taken after twelve terms' residence in college.

Oriel.—Undergraduates may reside in college or lodgings.

Queen's.—Undergraduates may, with the consent, if they are under age, of their parents or guardians, obtain the leave of the College to reside in lodgings during their whole course. In ordinary cases, however, the College discourages parents and guardians from exposing young men, at the outset of their University course, to the additional

risks involved in residence in lodgings. As a rule, scholars and exhibitioners may be required to go out of college after twelve terms', commoners after eight terms' residence. Residents, whether in or out of college, are allowed complete freedom in regulating their own expenses with reference to meals.

New College.—The "General Regulations" apply to this.

Lincoln.—Twelve terms' residence only within the college walls allowed.

Magdalen.—Undergraduates may reside either in college or lodgings, but, in the former, not longer than eight terms.

Brasenose.—The "General Regulations" given apply to this.

Corpus.—Limit to residence in college, twelve terms. Undergraduates may reside in lodgings.

Christ Church, Trinity, Wadham, and Pembroke, conform to the "General Regulations."

St. John's and Worcester are also governed by the "General Regulations," but residence in college is limited to twelve terms.

Keble.—*No* undergraduates are allowed to reside in lodgings.

Hertford.—Residence in lodgings allowed under special circumstances, but discouraged.

St. Mary Hall.—*See* "General Regulations." All undergraduates except Dyke scholars go into lodgings after eight terms' residence.

St. Edmund Hall, St. Alban Hall, and Charsley's Hall are guided by the "General Regulations."

"*Battelling.*"

This signifies, in common language, board. The following are the special rules of the colleges and halls on this point:

Balliol.—Optional to those who reside in lodgings.

Merton.—The same rule applies.

Oriel.—Unattached students who are scholars or exhibitioners may battel in college or not at their option.

New College and Lincoln.—Optional to those who reside in lodgings.

Brasenose.—Undergraduates are, as a rule, required to battel in college.

Corpus.—Those who reside in lodgings dine in the college hall, and have their other meals brought from the college.

Christ Church.—Resident undergraduates are required to battel in college.

Pembroke.—Battelling in college required.

St. Mary Hall.—Optional.

St. Edmund Hall.—Optional for those who reside in lodgings.

St. Alban Hall.—Same regulation.

Discipline.

There are certain rules in force, both *general*, that is incumbent on all undergraduates, and *collegiate*, incumbent on the members of a particular college or hall. The Delegates of Unattached Students have also issued certain rules for the government of the latter.

The chief University rules refer to the wearing of an academical costume, the frequenting of taverns, the maintenance of a horse, or keeping of a vehicle, smoking in the streets, playing at games of chance, betting, &c. The punishments generally inflicted are fine, rustication, or expulsion.

The collegiate rules of discipline refer to attendance at chapel, commencement of residence, attendance at lectures, night hours, the passing of the University examinations, &c.

Where not stated otherwise, it is to be understood that undergraduates must pass the University examinations at the earliest possible period.

Regulations of the Delegates of Unattached Students.

There must be eight weeks' residence in Michaelmas, and the same period in Lent term; and eight in the Easter and Trinity terms taken together. Residence for a shorter period or after full term, or non-residence for a term, or residence during a vacation, is only allowed when the previous permission of the Delegates has been obtained. Students are not allowed to engage lodgings without the consent of the Delegates.

With regard to night hours, students are placed in an absurd position by the University Regulations. These, in a land of freemen, are a standing disgrace to the Corporation, and an insult to its scholars; for, students who are out of the houses where they reside after 10 p.m. are liable to be reported to the Delegates by the lodging-house keepers, and if out after midnight they are fined ten shillings. Of course, undergraduates break through these regulations, and lodging-house keepers wink at late hours, so that they are not very burdensome; but this is anything but an argument in favour of the rules mentioned.

The University Museum.

The University Museum consists of the following departments: 1, Mathematics; 2, Astronomy; 3, Physics; 4, Chemistry; 5, Mineralogy; 6, Geology; 7, Zoology; 8, Biology; 9, Medicine. The departments possess each their lecture rooms, &c. Instruction is given by practical demonstrations and lectures.

The following points call for special notice:

Astronomy.—This department possesses three splendid telescopes.

Physics.—The instruction consists of lectures for beginners, fee £1, and the laboratory course for more advanced students. Fee for working three days per week, £3 per term.

Chemistry.—No fee for attendance on lectures. Fee for laboratory practice—Three days weekly, £3 per term; six days weekly, £5.

Biology and Medicine.—See "Guide to the Medical Profession" (L. Upcott Gill, 170, Strand, London, W.C.)

The Botanic Garden.

This affords opportunities for the study of Practical Botany.

Radcliffe Observatory.

Contains many splendid instruments. Advanced students are admitted by courtesy.

College Scientific Institutions.

At *Merton* there is a reading room, and lectures are delivered on Chemistry. At *Exeter* there are lectures on Natural Science. There is a laboratory fitted up with apparatus for the study of Histology and Embryology. At *Magdalen* there is a laboratory, and also a library for Natural Science students. Lectures are delivered on Natural Science, Experimental Physiology, Chemical Physics, and Elementary Mechanics. At *Christ Church* there is a laboratory, and lectures are given on Physics, Chemistry, &c.

Art.

The University Galleries contain many rare and valuable works. *The Ruskin Drawing School* affords instruction to those desirous of studying this branch of education.

Scholarships, Prizes, &c.

These are given by the University itself; the various Colleges and Halls; the City of London Companies; and the Public Schools.

The possession of a *scholarship* does not give the right to take part in the government of the college granting it. Its possessor is entitled to free instruction, rooms, and a certain allowance in money.

Exhibitions are often awarded to persons needing pecuniary assistance. A competitive examination is, however, generally held, the result being determined, partly by the attainments of the candidates, partly by their relative necessities.

Bible clerkships are in the gift of the college and hall authorities: they are, however, generally thrown open to competition amongst suitable persons.

The scholarships, prizes, &c., awarded by the University are as follows:

CLASSICS.—*Craven Scholarships*: Six in number; value £80 per annum; tenable for three years, open to those students who have passed the Second Public examination in one School at least, and who are not of more than twenty-four terms' standing. Greek and Latin. *Ireland Scholarships*: Four in number; value £30 per annum; tenable for four years. Candidates must not have exceeded their sixteenth term. Greek and Latin. *Hertford Scholarship*: One, awarded every Hilary term; value, interest of £1,142 10s. 4d. (3 per cent. Annuities). Candidates must not be of more than two years' standing. Latin only. *Chancellor's Prize for Latin essay*: Awarded every Trinity term; value £20. Candidates to be between four and seven years' standing. *Chancellor's Prize for Latin verse*: Awarded every Trinity term; value £20. Candidates to be of less than four years' standing. *Gaisford Prizes*: Two in number, awarded every Trinity term: value about £18 each. Candidates not to have exceeded their seventeenth term. *Conington Prize*: Awarded every three years for dissertation in English or Latin. Candidates must have passed the Final B.A. Value, three years' interest of £1,275, subject to certain deductions. *Derby Scholarship*: Awarded yearly. Candidates to be within their twentieth and twenty-fourth terms of standing. Candidates must have taken Honours. See the University Regulations.

MATHEMATICS.—*Senior Mathematical Scholarships*: Two in number; value £30 per annum, tenable for two years. The amount of the scholarship is increased by the moiety of another scholarship. Candidates must have passed the Final B.A. Subjects: Pure and Mixed Mathematics. *Junior Mathematical Scholarships*: Two in number; value £30, tenable for two years. Candidates must be of not more than eight terms' standing. Subject—Pure Mathematics. *Junior Memorial prize*: Awarded once in four years for essay on some astronomical or meteorological subject. The prize consists of a gold medal value £10 10s., and about £30 cash. Open to all graduates and undergraduates.

PHYSICAL SCIENCE.—*Radcliffe Travelling Fellowships.*—Three in number, value £200 per annum, tenable for three years. Candidates must have passed the Final B.A., and must declare their intention of graduating in Medicine at the University. *Subject of Examination*: Medicine. *Burdett Coutts Scholarships*: Two in number. Each scholarship consists of a moiety of the interest on £5800. Candidates to have passed the Final B.A., and must have attained their twenty-seventh term of standing. *Subjects of Examination*: Geology, Experimental Physics, Chemistry, and Biology.

LAW.—*Eldon Scholarship*: Awarded once every three years. Candidates to have passed the Final B.A., and either to have taken a First Class in one school, or to have gained a Chancellor's prize. There is no examination.

Vinerian Scholarships.—Three in number, value £80 per annum, tenable for three years. Candidates to have completed two, but not more than six years' standing. *Subjects of Examination*: Civil Law, International Law, General Jurisprudence, and especially the Law of England.

HISTORY.—*The Arnold Historical Essay Prize.*—Value £42. Candidates to be graduates of the University of not more than eight years' standing from the date of their matriculation.

The Stanhope Historical Essay Prize.—Value £20 in books. Candidates not to have exceeded their sixteenth term of standing.

The Marquis of Lothian's Historical Essay Prize.—Value £40 in money or books. Candidates must be of not more than twenty-seven terms' standing.

DIVINITY.—*Denyer and Johnson Theological Scholarships.*—These are three in number, and of £40 value each, tenable for one year. *Subjects of Examination*: The Bible, Creeds, Prayer Book, &c.

Ellerton Theological Essay Prize.—Value £21 in money. Candidates to have passed their Final B.A., and to have "commenced their sixteenth term from their matriculation inclusively for the space of eight weeks previous to the day appointed for sending in the essays and (to) have not exceeded their twenty-eighth term on the day on which the subject of the essay is proposed."

Canon Hall Greek Testament Prizes.—Two in number—a senior prize of £30, and a junior prize, £20. Candidates for the senior prize to be between their nineteenth and twenty-eight terms of standing inclusively, and to have passed the Final B.A. *Subject of Examination*: Greek Testament. Candidates for the junior prize to be of not more than eighteen terms' standing. *Subject of Examination*: Greek Gospels and Acts of the Apostles.

Hall Houghton Septuagint Prizes.—Two in number—a senior prize of the value of £25, and a junior prize of the value of £15. Candidates for the senior prize to be between their nineteenth and twenty-eighth terms inclusively, and to have passed the Final B.A. *Subject of Examination*: Septuagint version of Old Testament. Candidates for the junior prize not to have exceeded their eighteenth term. *Subject of Examination*: One or more books of the Septuagint.

Houghton Syriac Prize.—Of the value of £15. Candidates to be of

not more than twenty-eight terms' standing. *Subject of examination*: The ancient Syriac Versions of the Holy Scriptures.

ENGLISH COMPOSITION.—*English Essay* (*Chancellor's Prize*).—Value £20. Candidates to have completed four but not more than seven years' standing.

ENGLISH VERSE.—*Sir Roger Newdigate's Prize.*—Value £21. Candidates not to be of more than four years' standing. English poem on a sacred subject awarded once in three years. Value about £100. Candidates to have passed the Final B.A.

LANGUAGES.—*Boden Sanskrit Scholarships.*—Four in number, value £50 per annum, for four years. Candidates not to have exceeded their twenty-fifth year, and to be members of a college or hall. *Subject of Examination*: Sanskrit.

Kennicott Hebrew Scholarship. — Value one year's interest on £5261 11s. 1d. Consols. Candidates to have passed their Final B.A., and not to be of more than twenty-eight terms' standing. A certain amount of residence is imperative, viz., seven weeks in Hilary and Michaelmas terms severally, and seven weeks between the commencement of Easter term and the twenty-first day of October. *Subject of Examination*: Hebrew.

Pusey and Ellerton Hebrew Scholarships.—Three in number, value of each £55 for three years. A certain amount of residence is imperative on the holders. Candidates must be under the degrees of M.A. or B.C.L., or persons who, having taken those degrees, have not exceeded twenty-five years of age. *Subjects of Examination*: Hebrew and Scientific languages, &c.

Taylorian Scholarship and Exhibition.—Are awarded every Michaelmas term. Value £50 and £25 respectively, tenable for one year. Candidates to be of not more than twenty-three terms of standing. *Subject of Examination*: A selected language, with its literature, &c. The language is fixed every year.

The scholarships, prizes, &c., awarded by the colleges and halls are:

University.—Twenty-one *scholarships.* Four or five are filled up every year. There are no restrictions as to age, and they are tenable for five years. They are not awarded to those who are of more than four terms' standing. Annual value, £80 during residence. The *exhibitions* are about thirteen in number; they are in the gift of the College, and attached to certain schools. Should there be no properly qualified candidates from the schools to which the exhibitions are attached, they are thrown open to competition. Some few are confined to students needing pecuniary assistance. With regard to their value, this varies greatly.

Balliol.—**Fifteen *Foundation scholarships.*** Three of these are given every year after a Classical examination. Open to persons under nineteen years of age, and tenable for five years. Annual value, £80 per annum during residence. ***Mathematical scholarships*:** Four. One awarded yearly; tenable for four years. Open to all students of not more than one year's standing. Annual value, £80. ***Natural Science scholarships*:** Four. One awarded yearly. Candidates not to be of more than two years' standing. Tenable for four years. Annual value, £80. ***Modern History scholarships*:** Four. One awarded yearly. Candidates to be of not more than two years' standing. Tenable for four years. Annual value, £80. ***Classical exhibitions*:** Fifteen. Three awarded annually. Candidates to be of not more than eight terms' standing. Annual value, £70. Tenable for five years. ***Jenkyns exhibition*:** Awarded annually. Value, £100. Tenable for four years Candidates to be of not more than sixteen terms' standing. ***Hebrew scholarship*:** Awarded annually. Candidates to be of not more than two years' standing. Tenable for three years, and, under certain conditions, for four years. Value, £80. ***Two exhibitions*:** Open to candidates who have distinguished themselves in the Oxford Local examinations; and two ***exhibitions*** for Classical or General knowledge. Value of each, £40; tenable for four years. ***Fourteen Snell exhibitions*:** Open to Glasgow University students of Scotch parentage. Tenable for five years. Annual value, £110. Two or three awarded annually. Five ***Blundell scholarships*:** Open to persons educated at Tiverton School. One awarded every year. Annual value, £60. The ***Warner exhibition,*** awarded once in every five years. Tenable for five years. Annual value, £90. Open to persons of Scotch birth or parentage. Two ***exhibitions,*** confined to Tiverton and Ludlow Schools respectively.

Merton.—**Eighteen *postmasters* and four *scholars.*** The nomination to two of the postmasterships is vested alternately in the Provost of Eton and the Provost of King's. Taking the remaining postmasterships and scholarships together, ***ten*** are awarded after a Classical examination, ***five*** after a Mathematical examination, and the remaining ***five*** after an examination in Natural Science. They are all awarded annually, are tenable for five years, and are of the value of £80.

Exeter.—**There are twenty-eight *scholarships.*** Of these, ***fifteen*** are open, and are of the value of £80; ***ten*** are of the value of £60, and are confined to Exeter natives, or persons educated in the diocese of Exeter; ***three,*** of the value of £80, sometimes £70, are confined to persons born in the Channel Islands, or who have been students at Victoria College, Jersey, or Elizabeth College, Guernsey. The con-

fined scholarships, should no qualified candidate offer himself, may be thrown open to competition. These scholarships are tenable for five years. Candidates must not be more than twenty years of age, except in the case of the Natural Science scholarships, for which there is no such limitation. There are certain *exhibitions* confined to persons from Exeter and Truro Schools, and others are confined to the archdeaconries of Nottingham and Lincoln. There are also ten other *exhibitions* in the gift of the College, viz.: Two *How exhibitions*, each of the annual value of £35, awarded to the kin of the founder, *or* to sons of clergymen resident in Somerset or Devon, *or* to sons of Anglican clergymen not residing in these localities. The qualifications are placed in their order of preference. Two *Gifford exhibitions*, each of the value of £35 annually, awarded to persons educated at Ashburton School, *or* to those born or educated in the county of Devon, *or* they may be thrown open to all British subjects. The qualifications are placed in their order of preference. Two *Symes exhibitions*, each of the value of £60 per annum, awarded to persons born or educated in Somerset or Dorset, *or* they may be thrown open to general competition. The exhibitioner must agree to take Anglican orders. The *Mitchell exhibition*, value £40 per annum. Open to Divinity students. The *Richards exhibition*, value £30 per annum, open to general competition. Two *College exhibitions*, each of the value of £50 per annum, open to general competition. Candidates for exhibitions at Exeter College must satisfy the authorities that they are in need of assistance.

Oriel.—Ten *scholarships*; two awarded annually. Open to all persons whose age does not exceed twenty years; if members of the University they must be of not more than two years' standing. Tenable for five years; value £80. Scholars may reside either within or without the walls of the College; if resident in College, they are subject to the usual College charges; if resident out of college, they pay £10 for caution money, £21 for tuition fees, and £1 for College dues. Four *Adam de Brown's exhibitions*: Confined to persons needing assistance. Tenable until the end of the twentieth term of standing. Annual value, £80. Three *Robinson exhibitions*: Open to all students of the College. Tenable for three years. Annual value, £38. Logic and Moral Philosophy are the two chief subjects of examination. Two *Ludwell exhibitions*: The founder's kin and natives of Kent are generally chosen exhibitioners; but should no such candidates present themselves, the exhibitions are thrown open to competition. Value, £40; tenable for seven years. Four *Beaufort exhibitions*, which are in the nomination of the Duke of Beaufort. Natives of Gloucestershire, Monmouthshire,

and Glamorganshire have the preference shown them. They are tenable for seven years. Annual value, £25. Two *Ireland exhibitions*: Candidates to be of not more than ten terms' standing. Tenable until the sixteenth term. Value £30. *Subjects of examination*, as for the Public examination for Classical Honours. One *Rutland exhibition*: Candidates to be under the age of twenty, and to be of not more than two years' standing. Tenable for four (in some cases five) years. Annual value, £21. *Clerkships*: Two in number. Candidates must be in need of assistance. They are required to pay lower fees than other students, and there are certain exhibitions of the gross value of £80 (about) to which they are entitled. The clerkships are tenable for three (in some cases four) years from matriculation. No scholar or Adam de Brown's exhibitioner can hold more than one of the other exhibitions mentioned above.

Queen's.—There are fifteen *Foundation scholarships*, open to all candidates under the age of twenty years. Tenable for five years from day of election. Annual value, £90. One scholarship (sometimes more than one) is awarded every year for Mathematics and Physical Science. A scholarship is occasionally given in Natural Science *Bible Clerkships* (two), in the gift of the Provost. Candidates must be in need of assistance. Tenable for five years. Value, £81, *plus* rooms, rent free. One *Jodrell scholarship*: Awarded every four years. *Subjects of examination*: Classics and Divinity. Candidates to be under twenty years of age, natives of Great Britain or Ireland, and if members of the University, to be of less than three terms' standing. Candidates must stand in need of assistance. Annual value, £100; tenable for four years. Four *Eglesfield exhibitions*: Open to natives of Cumberland and Westmoreland. Candidates to be less than twenty years of age. Tenable for four years. Annual value, £81. Fifteen *Hastings exhibitions*: Open to persons educated at the schools of Carlisle or St. Bees in Cumberland, Appleby or Heversham in Westmoreland, Bradford, Doncaster, Giggleswick, Leeds, Pontefract, Richmond, Sedburgh, Wakefield or York in Yorkshire. No restriction as to age. Every school may send one candidate for each vacancy. Tenable for five years; annual value, £90. The *subjects of examination* are either: (1) Latin, (2) Greek, (3) Mathematics, (4) Natural Science or (5) Modern Language, History, and Literature. Any one of these five subjects may be chosen by the candidate. One *Fitzgerald exhibition*: Open to natives of Middlesex. Tenable for seven years; value, £66. One *Thanet exhibition*: Open to candidates educated at Appleby School. Value, £41 10s.; tenable for five years. Two *Holme exhibitions*: Open to natives of Cumberland and Westmoreland. Tenable for

five years; value, £45. One *Fox exhibition*: Open to natives of Cumberland and Westmoreland educated at St. Bees' School. Annual value, £33; tenable for five years. Two *Dixon exhibitions*: One is open to natives of Whitehaven, without regard to their place of education; the other to those natives of Whitehaven educated at St. Bees' School. Annual value, £36; tenable for five years. Two *Wilson exhibitions*: One is open to persons educated at Kirkby Lonsdale School, the other to persons educated at Kendal School. The first is of the value of £22; the second, £17. Both tenable for five years. The *exhibitions* mentioned below are not in the gift of the College, although attached to it: One *Tylney exhibition*, value £40, in the gift of the possessor of Tylney Hall. Two *Thomas exhibitions*, open to sons of clergymen in Carlisle diocese educated at Carlisle or St. Bees' Schools, or to sons of clergymen who have resided for three years in the diocese of Carlisle. These exhibitions are in the gift of the Bishop and Dean of Carlisle and the Provost of the College.

There are also several other smaller exhibitions, generally held with some other in the same College. No scholarship, exhibition, or Bible clerkship may be held with any other such source of income if the emoluments, taken together, exceed £110 per annum. Exhibitions confined to particular places or persons are thrown open to competition if candidates qualified by the conditions announced do not present themselves, or should such candidates prove unfit to receive the exhibitions concerned. Election to vacancies takes place—(1) On the second Saturday after Easter; (2) On the first Tuesday in October.

New College.—There are thirty *scholarships* open to Winchester boys, six being elected annually; and ten scholarships, open to all persons under twenty years of age. All the scholarships are tenable for five years, and are of the annual value of £100. There are also several exhibitions, two or three of which are filled up every year.

Lincoln.—Twelve *Foundation scholarships*, three awarded annually, tenable for four years, value £80. Scholars must reside in Oxford, and will forfeit the scholarships held by misconduct, neglect of study, or rejection at the University examinations. One *Matthews* and one *Radford scholarship*, tenable on the same conditions as the above. One *Tatham scholarship*: Preference is shown to persons born or educated in Buckinghamshire. Two *scholarships*, value £60, in the nomination of the Rector. Two or three *exhibitions*, of the value of £30, tenable for three years, are usually offered at the close of the annual scholarship examination to those candidates who have most distinguished themselves.

Jesus.—Twenty *scholarships*, confined to the following persons: first, those who are natives of Wales or Monmouthshire; secondly, of members of the University, those who, four years preceding their Matriculation, have been educated at one of the following grammar schools—Abergavenny, Bangor, Beaumaris, Bottwnog, or at the Free school of Cowbridge. Inclusive annual value, £80. Tenable for twenty terms after Matriculation. Candidates to be under twenty-four years of age. Two *scholarships* of the same value, and tenable for the same period as the above, but without restriction as to place of birth or education. About twenty-eight *exhibitions*, confined to the natives of Wales and Monmouthshire, tenable for twenty terms from matriculation, value £40. Candidates must stand in need of pecuniary assistance. There is a *scholarship* confined to persons born or educated in the Channel Islands.

Wadham.—Fifteen *scholarships*, value £80, open to persons under twenty years of age, and tenable for five years. One scholarship is generally given every year for Mathematics. Two *clerkships* of the value of £80, including rooms. Tenable until the degree of B.A. is obtained. They are in the nomination of the Warden. *Hody exhibitions*: Ten; four are given for Hebrew and six for Greek, tenable for four years; value, £45. The scholars are examined every term by the Regius Professors of Hebrew and Greek respectively. Four *Wills exhibitions*: Two are held by Fellows, two by Scholars. The former are worth £90, the latter £18. They are intended to encourage medical and legal study. Four *Goodridge exhibitions*: Two worth £20, and two £12. These are given to Commoners. One *Warner exhibition*, value £10, tenable for five years. One *Finney scholarship*, confined to natives of Staffordshire, tenable for five years, value £60. Two *Lady Holford's exhibitions*, confined to persons receiving their education at the Charterhouse, tenable for five years, value £20. One *Kay exhibition*, value £30, tenable for five years, and confined to natives of Yorkshire. The College also gives three *exhibitions* of the value of £21, tenable for three years. These are open without restriction. There is, besides those already dealt with, one *exhibition* of the value of £70, tenable for four years, to those senior candidates successively who have obtained the highest places in the Mathematical list at the Oxford Local Examinations.

Keble.—Two or more *scholarships* are given annually; they vary from £80 to £60 in value and are tenable for four years. The usual limit of age is nineteen years, but *exhibitions* are given to which this restriction does not apply. Candidates may be non-members of the University; should they be members, they must be of not more than one year's

standing from the date of their matriculation. The *Subjects of Examination* are: (1) Classics; (2) General Questions; (3) Historical Questions, or Latin and Greek Verses, as alternatives. *Scholarships* are given from time to time for Mathematics and Natural Science, and one *scholarship* is awarded after competition amongst candidates needing pecuniary aid.

Hertford.—There are twenty-one *scholarships* and two *exhibitions*. Eleven scholarships are tenable for five years, and one of the value of £100. Seven out of these eleven are *open*, four are *limited*. The limited scholarships are given to the following classes of candidates: (1) One to students from Harrow School; (2) One to natives of Essex, or to persons educated for three years in that county; (3) One to sons of former fellows of Brasenose College; and (4) one to founder's kin. If the candidates for the open scholarships are members of the University, they must be of not more than nine terms' standing from the date of their matriculation. *Lusby scholarships*: Three, of the value of £50 per annum. Candidates, if members of the University, must be of not more than eight terms' standing from the date of their matriculation. *Meeke scholarships*: Four, of the value of £40 per annum. Confined to students from the Free Grammar School, Worcester. *Macbride scholarship*, one, of the value of £40 per annum, open. *Lucy scholarships*, two, of the value of £25 per annum; confined to scholars from Hampton Lucy School. *White and Brunsell exhibitions*, two, in the nomination of the Principal. All the smaller scholarships and exhibitions are tenable for three years. In the case of any confined scholarship, should no properly qualified candidate present himself, it may be thrown open to competition. There is no restriction as to age for any of the scholarships; married persons are not eligible.

Pembroke.—There are three classes of scholarships at this college—open, close, and entirely close. *Open scholarships*: One of £90; five of £60 and £70, *plus* rooms; two (*Charles Ist scholarships*), of £52, usually increased; two of £60, given to necessitous candidates. *Close*: These are thrown open if qualified candidates from the favoured schools do not present themselves. Five of £50 and rooms, confined to Abingdon School; two of £90, with rooms for the senior scholar, for natives of the Channel Islands and students from Victoria College, Jersey, and Elizabeth College, Guernsey; one of £70 (*Bishop Morley's scholarship*) and rooms, under the same conditions; four *Townsend scholarships* of £90 and rooms, tenable for four years for scholars from Gloucester, Cheltenham, Northleach, and Chipping Campden schools; one *Holford scholarship* of £60, attached to the

Sutton foundation at Charterhouse, or in default, to all scholars of Charterhouse. *Entirely close*: One *Rous scholarship* of £60 for a scholar from Eton. These scholarships, with the exception of the Townsend, are tenable for five years. With regard to the close scholarships: (*a*) Candidates, if from the favoured schools, must have been educated there for the two years last past; (*b*) if there be no qualified candidate of sufficient merit, the scholarships are thrown open *pro hac vice*. The number of scholarships awarded every year is generally five.

Worcester.—Barnes' scholarship of the value of £120, tenable for four years. Open without restriction. *Subjects of examination*: Classics and the languages and subject matter of Holy Scripture. Five *Dr. Clarke's scholarships*, tenable for five years. Annual value £75. Open without restriction. Five *Mrs. Eaton's scholarships*, confined to the sons of clergymen. Candidates to be in need of pecuniary assistance. Tenable for five years from matriculation. Value £75. Six *Sir Thomas Cooke's scholarships*, confined to Bromsgrove School; they are tenable for five years, and are of the inclusive annual value of £55. One *Finney scholarship*, confined to natives of Staffordshire; it is tenable for five years; inclusive annual value, £60. Two *Lady Holford's exhibitions*, confined to persons educated at the Charterhouse, tenable for five years; inclusive annual value, £20. One *Kay exhibition*, annual value £30, tenable for five years, and confined to natives of Yorkshire. In addition to the above, the College gives a variable number of *exhibitions*, of the annual value of £21, for three years. The number of such exhibitions is at present three, and they are open without restriction. The College also offers an exhibition of the annual value of £70 for four years, to those senior candidates, successively, who have obtained the highest places in the Mathematical list of the Oxford Local examinations. Of the above scholarships and exhibitions, the Finney, Holford, and Kay may, in default of properly qualified candidates from the favoured localities, be thrown open to general competition. The examination usually takes place in Easter or Trinity term.

Magdalen.—Thirty *demyships*, of which three or four are usually awarded after an examination in Classics, one or more in Mathematics, and one or more in Natural Science. The examination is held in the week following Commemoration week, and the demyships are open without restriction to all persons who shall not have attained the age of twenty years on the subsequent 10th of October. They are tenable for four years, provided that the holder does not accept any appointment which will, in the judgment of the electors, interfere with the completion of his University studies, and their inclusive annual value

is £95. The examination for the Classical demyships consists of Greek and Latin composition in prose and verse, translations from Greek and Latin into English, and questions in Divinity, Ancient History, and Philology. In the examination for Mathematical demyships, papers are set in Arithmetic and Algebra, in Pure Geometry, in Trigonometry and the Theory of Equations, and in Analytical Geometry of two dimensions. Candidates have also to satisfy the electors of their ability to pass the University ordinary Classical examinations. One *Lamb scholarship*, tenable for four years, value £80. Candidates to be under twenty years of age. *Natural Science demyships*: General Physics, Chemistry, Biology, including Human and Comparative Anatomy and Physiology, "with the principles of the classification and distribution of plants and animals; but a clear and exact knowledge of the principles of any one of the above-mentioned sciences will be preferred to a more general and less accurate acquaintance with more than one." The examinations on Chemistry and Biology are sometimes partly practical. Questions are set in Algebra and Geometry, but failure to answer these correctly does not disqualify candidates. Candidates must prove their ability to pass the ordinary classical examination of the University. Beside the thirty demyships mentioned there are four *exhibitions* offered annually for competition. The subjects of examination are the same as those for the demyships, and the examinations are held at the same time. The exhibitions, however, are given to those persons needing pecuniary assistance, who fail to obtain demyships, and candidates must prove that they actually need such assistance. There are as a rule more applicants than exhibitions to be accorded, and for this reason the examination becomes competitive; the exhibitions being often won by candidates who attain a very high standard of excellency. An *academical clerk* is appointed to take part in the daily service at the College Chapel. Candidates have to pass an examination in Vocal Music (practical); value £95.

Brasenose.—Twelve *open scholarships*, of which number about three are awarded annually, tenable for five years. Value £80. Candidates to be under twenty years of age. *F. Somerset scholarships*: Twenty-two in number. These are confined to Hereford, Manchester, and Marlborough Schools, but in default of qualified candidates from these schools they are thrown open to competition. One person is permitted to hold two scholarships. Tenable for five years. Value, from £36 8s. to £52. One *John Watson scholarship*, open to persons under twenty years of age; tenable for five years. Value £100. The examination is Classical. *Hulme exhibitions*: Seventeen, in the nomination of the Dean of Manchester and the Rectors of Prestwich and Bury. Candidates

must have entered upon their thirteenth term of standing, and from this period they are tenable for four years. Scholars must reside in Oxford during the terms. Value £135, *plus* £20, to be spent in the purchase of books approved of by the Principal. *Colquitt Clerical exhibitions*: Three. Candidates should be sons of poor or deceased clergymen, or of poor laymen; they must agree to take Anglican Orders, and must have resided at least one term. Tenable for four years from matriculation.

Corpus.—Twenty-four *scholarships*, open to persons under the age of twenty; tenable for five years from matriculation. Value £80, in addition to rooms rent free during residence. The nominal value of the scholarships is somewhat higher than that mentioned above. The President and Fellows have instituted other exhibitions tenable by commoners only.

Christ Church.—Twenty-one *junior studentships*, confined to the boys of Westminster School. Thirty-one other *junior studentships*. For *three* of these the examination is in Mathematics and Physical Science alternately. The remainder are given for Classics. Candidates for Physical Science studentships must be under twenty years of age on the 1st January preceding the election. Candidates for the other studentships to be under the age of nineteen on the same day. Tenable for five years; value £85, in some cases £100, including room rent. Ten *exhibitions*: Candidates to be in need of assistance. Value £50, *plus* free tuition and dinner in hall. Tenable for three years. *Fell exhibitions*: Four. Value £40, tenable for four years. Candidates to be Commoners commencing residence not later than the January before the election. They are awarded annually. One *Slade exhibition*, value £30, tenable for one year, open to unmatriculated candidates. The exhibitions mentioned below are attached to the College, but not in its gift. *Holford exhibitions*: Two, open to Charterhouse students Tenable for five years, value £60. Candidates not to have exceeded the fourth term from their matriculation.

Trinity.—Thirteen *scholarships*, open to persons between the ages of sixteen and twenty. Tenable for twenty terms; annual value, £80. *Subjects of examination*: Latin and Greek. One *Henniker scholarship*, value £25, tenable, if the scholar is re-elected, for five years. *Subjects of examination*: Divinity and Mathematics. Two *exhibitions*, value £25, tenable for one year, open to Commoners of the College.

St. John's.—Twenty-eight *scholarships*: Of these twenty-one are confined to persons under the age of nineteen years, and who have been educated for the two preceding years at Merchant Taylors' School, or in default of properly qualified candidates from that school, at Christ's

Hospital. The *Merchant Taylors' scholarships* are tenable for seven years. Two *scholarships* are confined to Coventry School, two to Bristol School, two to Reading School, and one to Tunbridge School. Candidates to be under the age of twenty. These scholarships are tenable for five years. The whole of these twenty-eight scholarships may be thrown open to competition should no qualified candidates from the favoured schools present themselves. They are of the value of £100. Five *open scholarships*, tenable for five years, value £100. Candidates to be under twenty years of age. One *Holmes scholarship*, tenable for five years. No restriction as to age. Four *Casberd scholarships*, tenable for four years, value £80. Candidates to be members of the College who have resided one year at least, and who are not foundation scholars. One *Lamb scholarship*, open to all persons under twenty-eight years of age, tenable for four years; annual value, £80.

St. Mary Hall.—Four *Dyke scholarships*, confined to natives of Somerset, Devon, and Cornwall, and to persons who for the three years preceding the 31st day of December next before the day of appointment have resided in those counties, or who for the two years ending on such 31st December have been educated at any school or schools in the counties mentioned. Candidates must be under twenty years of age; if members of the University they must not have exceeded four terms of standing from the date of their matriculation, and they must stand in need of pecuniary assistance. The scholarships are tenable for four years, value about £60. One scholar is appointed annually. One *Nowell exhibition*, value £30, tenable for four years from the date of matriculation. Preference is given to the kin of the founder, Dr. Nowell, formerly Principal of the Hall, or his wife; and next to the lawful descendants of the Rev. John Rawbone (sometime Vice-Principal of St. Mary Hall), by Jane Mary, his wife. In default of such candidates the appointment rests with the Principal.

St. Edmund Hall.—There is a *Bible-clerkship* of the value of £50, and an *organistship* of the value of £24; both are tenable for three years. Candidates for the former must be in pecuniary need. There is a competitive examination. The latter is in the nomination of the Principal. No restriction as to age in either case. In addition there are some *exhibitions* of £20 a-year, thrown open to competition.

Exhibitions for Unattached Students.

The difference between a scholarship and an exhibition is this: the former is supposed to be given as the reward of scholarly attainments irrespective of the candidate's pecuniary condition; the latter is awarded to assist poor but industrious students to undergo their

curriculum. As a matter of fact, the exhibition is very often snapped up by those who could very well afford to dispense with its aid.

The Company of Grocers offers two *exhibitions* annually. *Conditions*: 1. The candidate must be in need of pecuniary aid; 2. He must have resided in the University for one term at least; 3. He must have passed Responsions; 4. He must undergo an examination. The exhibitions are tenable for three years. The exhibitioner must not be in receipt of an income from other exhibitions, scholarships, &c., amounting to more than £80 per annum.

The Clothworkers' Company offers one *exhibition* each year; they are of the value of £50, and are tenable for three years from the date of matriculation. The exhibition is given after a competitive examination. *Subjects*: Algebra, Euclid and Plane Trigonometry, Elementary Mechanics and Hydromechanics. *Optional subjects*, not more than two to be offered: Chemistry, Heat, Electricity, Geology, and Botany. The elected candidate must matriculate at once, and keep residence from the time of election, unless he can produce good and sufficient reason for the contrary. Responsions must be passed within four terms from matriculation, and Moderations within eight terms; failure to do so entails forfeiture of the exhibition.

Exhibitions for unattached students are forfeited should the exhibitioners become members of any college or hall.

The Abbott Scholarships.

The gross value of these is the interest on £6000 for one year. The scholarships are three in number, and are offered for competition on the following conditions: Candidates to be sons of Anglican clergymen, and to stand in need of assistance; if members of the University, they must not have exceeded their third term of residence. Natives of the West Riding of Yorkshire are preferred in the case where the other claims of rival candidates are equal. The scholarships are tenable for three years. Should a non-member of the University be elected, and should he defer commencing residence for more than one term beyond the term of his election, the emoluments of his scholarship are reckoned only from the date of his commencing residence. The Abbott scholarships are not tenable with any scholarship or exhibition in any college or hall exceeding in value £50.

College Fellowships.

University.—There are twelve *Foundation Fellowships*, open to all persons passing the Final B.A. Candidates must be unmarried. The scholarships are tenable for eight years in some cases, in others for life. Persons whose fixed incomes amount to £500, from more than one (non-

academical) source, or to £400 from any one (non-academical) source, are disqualified for holding fellowships. However, if they be officers of the College, have been elected to fellowships, and afterwards their incomes reach this amount, they may be retained by consent of the College. Fellows who have enjoyed for three consecutive years an income (exclusive of their fellowships) of £700, and who have not during any portion of this period resided or held office within the College, vacate their fellowships. There is a *Civil Law fellowship* open to those who have passed the Final B.A. without restriction as to marriage.

Balliol.—Eleven *fellowships*. There is no restriction as to age, income, or academical standing, "except that if candidate be, or has been, a member of any university in Great Britain or Ireland, he must have passed all the examinations required by that university for the degree of Bachelor of Arts." There is generally a competitive examination. There are two classes of Fellows: 1. Fellows on the Tutorial list, holding their fellowships for twenty years, when they may be re-elected. They must reside at the University, and be engaged in tutorial work, and they may marry under certain conditions. 2. Fellows not on the Tutorial list, who hold their fellowships for seven years exclusive of any time not exceeding three years, during which they may have been occupied in collegiate or university duties. Any fellow may be re-elected if he be engaged in the study of literature or science and the College is satisfied that his researches are likely to be of public benefit. "Under certain circumstances, fellows whose income from other sources exceeds £300 per annum receive only one-third of the emoluments of their fellowship."

Merton.—Twenty-four *fellowships*, open to those who have passed the Final B.A. The fellowships are vacated by marriage, except in the case of tutors, lecturers, bursars, &c., when the consent of the College to their marriage may be obtained.

Exeter.—Fourteen *fellowships*, open to those who have passed the Final B.A., to those who have been admitted *ad eundem gradum* to the B.A. degree, to members of Convocation, &c. There is also a Chaplain Fellow.

Oriel.—Eighteen *fellowships*. Candidates to be under twenty-six years of age, and to be Bachelors of Arts of some British or Irish university. Fellows may be elected without examination if specially approved by the College authorities.

New College.—Thirty *fellowships*. Fifteen open to those who have passed the Final B.A. examination. The remaining fifteen are open "to persons who, having received education for at least two years in the School of Winchester College, or having been for at least twelve terms

members of New College, have passed the examinations requisite for the degree of B.A. in some other University in Great Britain or Ireland." Marriage is permitted to fellows who have filled the office of Tutor, Lecturer, or Bursar for a certain length of time. Fellows are elected without examination if the College authorities consider they are likely to prove valuable members of the institution.

Lincoln.—Ten *fellowships*, open to those who have passed the Final B.A. They are all vacated by marriage, "except that, if any fellow holds either of the College livings of All Saints and St. Michael's, Oxford, he may retain his fellowship, although he be married. Fellows highly approved by the College may be elected without any examination." Their annual value is about £300 each.

Brasenose.—Thirteen *fellowships*, open to those who have passed the final B.A.

Queen's.—Eighteen *fellowships*, open with certain restrictions to all persons who have passed the Final B.A. examination. All the fellowships are vacated by marriage.

All Souls.—Thirty *fellowships*, open to all who have passed the Final B.A., without any restriction as to income. Candidates must have obtained a First Class in some University Public examination, or have obtained a prize or scholarship open to general university competition. The fellowships are vacated by marriage, with the exception of those held by professors.

Magdalen.—Thirty *fellowships*, open to all persons (Oxonians and Cantabs) who have passed the Final B.A. examination. All the fellowships are vacated by marriage.

Corpus Christi.—Fifteen *fellowships*, open to all those who have passed the Final B.A. examination; there are also two professional fellowships. All fellowships vacated by marriage. Two fellowships may be filled by election without examination, and without any restriction as to marriage—if the candidates are approved by the College and considered likely to prove useful in educational work.

Christ Church.—Twenty-eight *senior studentships*, nineteen being clerical and nine lay. Three are termed *Lee's Readerships in Chemistry, Anatomy, and Physics.* Lee's readers may marry, have no restriction as to income, and may be elected without examination. Candidates for the other studentships must have passed all examinations for the B.A. degree.

Trinity.—Twelve *fellowships*, open to all persons who have passed the Final B.A. These fellowships are vacated at the expiration of six months after marriage.

St. John's.—Eighteen *fellowships*, open to those who have passed the

Final B.A. Professors and Heads of Halls are alone exempted from the necessity of vacating their fellowships on marriage. Besides these fellowships there are other four, tenable for fourteen years, and of the annual value of about £180. They are open, first, to the relations of the founder, Dudley Fereday, Esq., next to natives of Staffordshire, and lastly to all persons.

Jesus.—Thirteen *fellowships.* One moiety is confined to Welshmen and natives of Monmouthshire—the remaining moiety is open to other candidates. Bachelors of Arts are alone eligible for the fellowships. These are vacated by marriage

Wadham.—Fourteen *fellowships.* Candidates to have passed the Final B.A. As a rule, the fellowships cannot be held by married graduates, but the College may elect them provided they hold the office of Tutor, Lecturer, or Bursar. There are two *exhibitions*—one in Law and one in Medicine, tenable by fellows.

Pembroke.—Ten *fellowships.* Candidates to have passed the Final B.A. Two are entitled Shefford Fellows: one of these must proceed to the Bar, the other must graduate in Medicine. All the fellowships are vacated by the marriage of their holders.

Worcester.—Thirteen *fellowships.* Candidates to have passed the Final B.A. The *Eaton* Fellowships are tenable only by sons of Anglican clergymen and not possessed of an annual income exceeding £150. The fellowships are vacated by marriage, with the exception of two tenable by professors.

Hertford.—Fifteen *fellowships.* Candidates must have passed the Final B.A. Oxford, Cambridge, or Dublin. The majority are only tenable by Anglicans and members of the Irish, American and Colonial Episcopal Churches. Eleven can be held by unmarried persons only. Two are filled by married candidates. Two are temporary and unendowed.

Holy Orders as a Qualification for Fellowships.—This is imperative in the following instances: *University*, two fellowships; *Balliol*, two or three, according to circumstances; *Exeter*, chaplain fellowship; *Oriel*, five (agreement to take Orders suffices); *Lincoln*, every fellow must take Orders within ten years from his admission unless he has been elected to a lay fellowship; *Brasenose*, six fellowships; *Queen's*, nine; *Magdalen*, two-thirds of the fellowships; *Corpus*, six fellowships; *Christ Church*, nine; *Trinity*, four; *St. John's*, two-thirds of the fellowships; *Jesus*, nine; *Pembroke*, four; *Worcester*, two-thirds. The value of the above fellowships differs greatly. With a tutorship they range from £500 to £900 per annum. There is an advantage in possessing a fellowship other than the immediate emoluments received.

Fellows in Holy Orders have claims in due succession to the livings in the gift of their College. Fellows also, whether in orders or not, take part in the government of the college to which they are attached. They occupy much the same relation to the University as members of the City Companies to the Municipal Corporation. They are *freemen* of the College to which they may be attached (there being no *University* Fellowships), and as such they take part in its government, being entitled to a vote in the election of collegiate officers. As Fellows simply, they hold no recognised University rank, although their social position is unexceptionable; but they alone are eligible for all the higher academical appointments.

Degrees.

There are five Faculties at the University—Arts, Music, Law, Medicine, and Divinity. Of these the three latter are called "Superior" Faculties, it being requisite that candidates should graduate in Arts before taking a medical, legal, and theological degree. Music, I am sorry to say, may be said to exist on sufferance merely. Graduation in this Faculty does not confer the same academical privileges as degrees in other departments of study.

ARTS FACULTY.—*The Bachelorship.*—Candidates must reside twelve terms within the limits of the University; this period amounts to about two years and eight months. They must pass the First and Second Public Examinations. *Fee*—£7 10s.

The Mastership.—Candidates must be Bachelors of Arts, and have commenced their twenty-seventh term of standing. *Fee*—£12, unless the candidates be Bachelors of Medicine or Civil Law, in which case the *fee* is £7.

CIVIL LAW.—*The Bachelorship.*—Candidates to be Bachelors of Arts, and to have entered on their twenth-seventh term of standing. There is an examination to be passed. *Fee*—£6 10s.

The Doctorate.—Candidates must be Bachelors of Civil Law of five years' standing. A dissertation has to be publicly read before the Regius Professor of Civil Law. *Fee*—£40.

MEDICINE.—Candidates must be Bachelors of Arts, and have entered on their twenty-seventh term of standing. They must have undergone a four years' medical curriculum since passing the Second Public examination in Arts. They must pass two professional examinations, and pay a fee amounting to £15 10s.

The degree of *Bachelor of Medicine* is a *legal* qualification to practice, and it may be registered at the Medical Council; but the University itself does not regard it as a full qualification *per se*. It is only the

Doctorate which occupies this position. Accordingly, Bachelors of Medicine wishing to practice are expected to apply for the University License, which is given them without further examination. The distinction drawn between the privileges of Bachelorship and the Doctorate is of course merely formal and artificial, and has, as I have said, no legal existence.

The Doctorate.—The candidate must have taken the Bachelorship three years previously. A dissertation has to be publicly read in the presence of the Regius Professor of Medicine. *Fee*—£40. Doctors of the University are supposed to have *ipso facto* the University licence to practice medicine.

DIVINITY.—*The Bachelorship.*—Candidates must be Masters of Arts of three years' standing, and must be priests of the English Church. Two dissertations have to be publicly read before the Regius Professor of Divinity. *Fee*—£14.

The Doctorate.—Candidates must be Bachelors of Divinity of four years' standing. They must publicly read and expound on three separate days three portions of Holy Scripture. *Fee*—£40.

Accumulation of the degrees of B.D. and D.D.—A Master of Arts who has completed fifteen years from the date of his graduation may take the two degrees of Bachelor and Doctor of Divinity at the same time. "In this case he is at liberty to perform the exercises for either of the two degrees, whichever he may choose." There is an additional *fee* in this case of £5.

MUSIC.—*The Bachelorship.*—Candidates must be matriculated students of the University. Residence is not compulsory. There are two examinations to be passed and a piece of music to be composed. Total amount of *fees*—£12.

The Doctorate.—Candidates must be Bachelors of Music of five years' standing. There is a written examination to be passed and a piece of music to be composed and performed in public. *Fee*—£10.

Degrees conferred in absentia.

Bachelors of Arts, Civil Law, or Medicine, of Oxford University, and who may be resident in a British Colony, may be admitted *in absentia* to the degree of Master of Arts, to that of Doctor of Civil Law, or to that of Doctor of Medicine, or Divinity, on the following conditions: They must have completed the requisite period of standing. If they seek the Doctorate in Medicine, Civil Law, or Divinity, they must forward their dissertations or exercises to the Regius Professor of the Faculty concerned. They must obtain the consent of their college or

hall or that of the Bursars of Unattached Students, as the case may be. If they seek the degree of Doctor of Divinity, they must signify their assent to the Thirty-nine Articles and Book of Common Prayer.

Incorporation.

Members of the Universities of Cambridge and of Dublin may be admitted into the same status or degree at the University of Oxford.

Incorporation of Undergraduates.—Undergraduates can count only those terms kept at their University, which covered forty-two days actual residence in each term. With the following exception they are exempt from no examinations whatever: Previous Examination at Cambridge exempts from Responsions.

Incorporation of Graduates in Arts.—They must have resided for the major part of each of nine terms at their University. The consent of the Hebdomadal Council must be obtained. Their names, before being admitted *ad eundem gradum*, must be entered on the books of some college or hall.

Incorporation of Graduates in Civil Law and Medicine.—They must have either taken the degree of B.A. in their University, or have passed the requisite examinations for the same. They must have resided for the major part of each of nine terms before taking their first degree. The consent of the Hebdomadal Council has to be obtained. They must be of the same standing and have passed examinations and performed exercises corresponding to those required for the same degree in the University of Oxford.

Incorporation of Graduates in Divinity.—They must satisfy the conditions incumbent on graduates in Law and Medicine, and must signify their assent to the Prayer Book and Thirty-nine Articles.

Examinations for Degrees.

ARTS.—*The Bachelorship.*—The University does not lay down a uniform course for all candidates for the degree of Bachelor of Arts, but allows a large amount of choice in regard to the subjects, the time, and the order of the several examinations. There are altogether twelve examinations in Arts; but it is not required that every candidate for the degree of B.A. should pass all of these. In ordinary cases *four* —Matriculation, Responsions, First Public examination, Second Public examination—suffice for the purpose of obtaining a degree. *Responsions* are obligatory upon all, except those who have passed either the Previous examination at Cambridge or the Oxford and Cambridge Schools' examination; they are intended to serve as a preliminary test of a student's fitness to enter upon a University course. They may be passed immediately after matriculation, and although the University

itself does not, in the case either of this or any other pass examination, lay down any limit of time within which they must be passed, a definite rule on the subject exists at most colleges. The *First Public examination* is obligatory upon all, but a student has the choice of returning his name either as an ordinary candidate or as a candidate for Classical Honours. There is also an examination for Honours in Mathematics, which is altogether optional, and does not count as one of the examinations necessary for a degree. The *Second Public Examination* consists of two parts: (*a*) The examination in the Rudiments of Faith and Religion, or in the matter substituted therefor, is uniformly obligatory upon all. (*b*) The other part of the examination is subdivided into seven schools, of which, though a student may combine as many as he pleases, no student is required to pass more than one. These schools are: (*a*) The Pass School; (*b*) The Honour School of Literæ Humaniores; (*c*) The Honour School of Mathematics; (*d*) The Honour School of Natural Science; (*e*) The Honour School of Jurisprudence; (*f*) The Honour School of Modern History; (*g*) The Honour School of Theology. The conditions under which candidates are eligible for, and under which certificates are given in the several examinations, are mentioned below:

RESPONSIONS.—The examination is held three times yearly: in December, Lent, and the second week before Commemoration. *All matriculated undergraduates* are eligible for examination. Candidates must give a week's notice to the Junior Proctor of their intention to present themselves, and must, at the time of doing so, mention the books, &c., in which they wish to be examined. *Fee*—£1. *Subjects of examination*: These are five in number, and the candidate must pass in *each*; failure in any one involves rejection: 1. Algebra — addition, subtraction, multiplication, division, greatest common measure, least common multiple, fractions, extraction of square root, simple equations, containing one or two unknown quantities, and problems producing such equations; or, Geometry, books i. and ii., including riders. 2. Arithmetic (Hensley's "Scholars' Arithmetic" recommended); 3. Greek and Latin Grammar—Candidates must be able to parse, and have an elementary knowledge of syntax; 4. Translation from English into Latin Prose; *books recommended*, Bradley's "Lessons in Latin Prose," Kennedy's "Curriculum Stili Latini," and Sargent's "Easy Passages for Translation into Latin Prose; 5. One Greek and one Latin author at the candidate's choice. The following are those usually selected: Homer — five consecutive books. Æschylus — two of the following plays: Agamemnon, Choephoræ, Eumenides, Prom. Vinctus, Sept. cont. Thebas. Sophocles—two plays. Euripides—two of the

following: Hecuba, Medea, Alcestis, Orestes, Phœnissæ, Hippolytus, Bacchæ. Aristophanes—two of the following: Thebes, Ranæ, Acharnenses. Thucydides—two consecutive books. Xenophon—Anabasis, four consecutive books. Demosthenes—Philippics and Olynthiacs; Æschinus—In Ctesiphontem. Virgil—(1) The Bucolics, with three consecutive books of the Æneid; *or* (2) The Georgics; *or* (3) Five consecutive books of the Æneid. Horace—(1) Three books of the Odes (counting the Epodes as a book of the Odes), together with either a book of the Satires, or a book of the Epistles, or De Arte Poetica; *or* (2) the Satires, with De Arte Poetica; *or* (3) the Epistles with De Arte Poetica; Juvenal—the whole, except Satires ii., vi., and ix.; Livy—two consecutive books, taken either from books i—v. or xxi.—xxv.; Cæsar—De Bello Gallico, four consecutive books; Sallust—Bellum Catilinarium, and Jugurthinum; Cicero—(1) The first three Philippics; *or* (2) De Senectute and De Amicitia; *or* (3) four Catiline Orations, with the Oration Pro Archia.

First Public Examination.—This may be taken as a simple Pass, or as an Honours examination in Classics only.* The Honours papers are totally distinct from the Pass. (*See* Addenda.)

Pass Only.—It is held twice yearly—(1) in Easter or Trinity term, and (2) in Michaelmas term. Candidates must have entered upon the fourth term of standing; or, under certain circumstances, their third term. They must have passed one of the following examinations: Responsions, Cambridge Previous examination, Oxford and Cambridge Schools examination, including Latin, Greek, and Mathematics. They must give six days' notice of their wish to be examined, and must pay a fee of £1 10s. They are required to state, at the same time, the books and subjects (when optional) they select. If a candidate has a conscientious objection to be examined in the Gospels, he can, on giving valid reasons, obtain leave to substitute another book in their place.

Subjects of Examination.—Five in number, and candidates must pass in each one: 1. *Four Gospels in Greek.* Candidates objecting to be examined in the Gospels are allowed to choose instead one of the books (Greek) given below. 2. *Logic or Mathematics.* Books recommended: Fowler's "Elements of Deductive Logic," and the first five chapters of Fowler's "Elements of Inductive Logic" (omitting the sections on Classification, Nomenclature, and Terminology, and the notes appended at the end of each chapter), and Jevons' "Elementary Lessons in Logic." In *Algebra* candidates are expected to be acquainted with the first four rules (including simple irrational

* A Mathematical Honours examination *may* be taken, but this does not exempt from any Classical work.

quantities expressed by radical signs or fractional indices), greatest common measure and least common multiple, fractions, extraction of square root, simple and quadratic equations, ratio and proportion. In *Geometry*, Euclid, book iii., and the first nine propositions in book iv. 3. *Translation of English into Latin.* 4. *Three books* from the following list, one to be Greek, and one a historical or philosophical work (candidates are expected to be acquainted both with the text and the subject matter, and to answer questions on the grammar of and literature in connection with the book in question): *Greek*—Herodotus, v. and vi.; Thucydides, vi. and vii.; Xenophon's Memorabilia, i., ii., iv.; Plato, Apologia, Meno; Aristotle, Polit., i. iii. *Latin*—Livy, v., vi., vii.; Tacitus, Hist., i., ii., iii.; Cicero De Natura Deorum, i., ii. One at least of the books *must* be taken from the above list. Other books are: *Greek*—Demosthenes, De Corona; Homer, Il., xvii.—xxii.; Æschylus, Prom., Pers., Sept. c. Theb.; Aristophanes, Acharn., Nubes. *Latin*—Cicero, Pro Roscio Amerino, Philipp. ii.; Terence, Andr., Phorm., Hiant.; Virgil, Æn., vii.—xii.; Horace, Sat., i., ii., Epist., i., ii.; Juvenal except Sat., ii., vi., ix. 5. Translation of passages from unannounced Greek and Latin works.

SECOND PUBLIC EXAMINATION.—This consists (1) of an examination in the Rudiments of Faith and Religion; (2) an ordinary Pass examination in the subjects of the First Public examination; but the list is of a more advanced character, and the particular books are liable to be changed from year to year; (3) an Honours examination —(*See* ADDENDA)—in six different schools—Literæ Humaniores, Mathematics, Natural Science, Jurisprudence, Modern History, Theology. Candidates obtaining honours in *any one* of these schools are considered to have passed the Second Public examination, provided they have satisfied the examiners in the Rudiments of Faith and Religion, or the matters allowed to be substituted for these.

Candidates for the examination in Faith and Religion, or in the matters which may be substituted for this, must have commenced their twelfth term of standing. Candidates who seek honours must be of the same standing as the above. No undergraduate is allowed to attend an honours examination after the expiration of sixteen terms from matriculation, "unless he has been classed in some other school of the Second Public examination, in which case he may be admitted up to the twentieth term inclusively."

Candidates are admitted to the Pass examination in any term following the one in which they passed the First Public examination. The *fees* for the Second Public examination are: For Faith and Religion, or substituted matters, £1; for each of the subjects of the

Pass school, 10s.; for any honour school excepting Natural Science, £1 10s.; for each of the Natural Science subjects in the Preliminary Honour examination, 10s.; for the Final Honour examination, 10s. Where a choice of books or subjects is allowed, candidates must give notice of selections. As previously stated, undergraduates objecting to be examined in religious subjects may substitute other matters.

2. *Degree of Bachelor of Civil Law.*

Candidates must be Bachelors of Arts. The subjects of examination are four in number: (1) Jurisprudence, (2) Roman Law, (3) English Law, (4) International Law.

A.—*Jurisprudence, General or Comparative.*—Candidates are examined either in Jurisprudence and the Theory of Legislation or some department of a foreign code. Under this heading candidates will be allowed to select one of the following departments: (1) Indian Penal Code, chaps. xvi., xvii., xviii.; (2) French—Code Civil, livre III., titre iii.; (3) German—Allgemeines Handelsgisetz buch Viertes Buch, titt. ii., iii., iv., v. (erster Abschnitt) (artt. 337—421); (4) Italian—Codice Civile, libro i., tit v., libro iii., tit. v.

B.—*Roman Law.*—One of the following subjects: (1) The Law of Family Relations; (2) Ownership and Possession; (3) Theory of Contracts generally; (4) The four Consensorial Contracts; (5) The History of Roman Legislation and Roman Judicial Institutions.

C.—*English Law.*—Candidates are expected to be fairly acquainted with the Law of Property, of Family Relations, and of Contracts and Torts. In addition two of the following subjects must be taken, and not more than one from any division: *Division A.*—(1) General Principles of the Law of Contracts; (2) The Law of Agency; (3) The Law of Sale; (4) General Principles of the Law of Torts. *Division B.*—(1) Outlines of the Law of Real Property; (2) The Law of Easements; (3) Leading Principles of Equity; (4) The Law of Trusts; (5) The Law relating to Fraud. *Division C.*—Outlines of Criminal Law. *Division D.*—Principles of the Law of Evidence.

IV.—*International Law.*—Either the General Principles of Private International Law or the Law of Prize.

3. *Degree of Bachelor of Medicine.*

Candidates must have passed the Second Public B.A. examination. There are two professional examinations, and the full medical curriculum is exacted. For further particulars see "Guide to the Medical Profession."*

* "A Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

4. *Degree of Bachelor of Music.*

There are two examinations: the first is on Harmony and Counterpoint, and is both *viva voce* and written; the second examination comprises the Composition of a piece of Music in five-part Harmony, with an accompaniment for at least five stringed instruments, and a written and *viva voce* examination in: (1) Harmony; (2) Counterpoint, in not more than five parts; (3) Canon, Imitation, &c.; (4) Fugues; (5) Form in Composition; (6) Musical History; (7) A Critical Knowledge of the full scores of certain works which are designated from time to time by the Professor of Music, and notified in the "University Gazette." The *texts-books* which are *recommended* for the examination are Oakley's "Treatises on Harmony, Counterpoint, and Form in Music"; Berlioz or Kastner "On Instrumentation," and either Burney's or Hawkins' "History of Music." The examination is conducted partly in writing, partly *viva voce*.

Expenses.

A student residing at a college or hall can with economy graduate as B.A. at a cost of £300. This includes board, lodging, and washing during times of residence; tuition and fees, &c., clothes, books, railway fares, and cost of living in the vacations are not included.

The following are more detailed particulars:

University fees.—(1) Matriculation of a Bible clerk or scholar, 10s.; every other person, £2 10s.; (2) Examination fees—Responsions, £1; First Public, from £1 to £1 10s.; Second Public examination on Faith and Religion or substituted matter, £1; each subject in the Pass school, 10s.; each Honour school, excepting Natural Science, £1 10s. *Natural Science School*: Each subject in Preliminary Honour examination, 10s.; Final Honour examination, 10s. *Civil Law*, £1. *Music*: Before each examination, £2; after passing Final, £7. *Medicine*: Before each examination, £1; after passing Final, £9. *Degree fees*: B.A., £7 10s.; M.A., £12; M.A. to Bachelor of Civil Law or Medicine, £7; B.C.L., £6 10s.; B.D., £14; M.B., £6 10s.; Doctor of Civil Law, Medicine, or Divinity, £40; Mus. B., £5; Mus. D., £10. Additional fee for degrees in absentia, &c., £5; additional fee for accumulated degrees, £5; additional fee when a degree is conferred by diploma, £10 10s.

Incorporation Fees.—Matriculation fee (in all cases), £2 10s.; B.A., £8; M.A., £15; B.C.L., B.D., or M.B., £15; D.C.L., D.D., or M.D., £40; Mus. B., £5; Mus. D., £10; annual fee, £1; payable until graduation.

College Expenses.—A small admission fee, ranging from £1 10s. to

£6 9s., is charged at most colleges; the greater number of the colleges also require the deposit of a certain sum, termed "Caution money," which is returned to the student on his taking his name off the college books. This deposit ranges in amount from £5 to £30. *Tuition fees* range from £15 15s. to £24 annually for three years. At St. Alban Hall there is no separate tuition fee, the latter being included in other charges. At Charsley's Hall the members elect their own tutors, with whom they make their own arrangements. *Establishment, servants, and general charges* per annum: Balliol, about £21 10s.; Merton, about £16 10s.; Exeter, about £23 (a percentage is charged on all provisions supplied); Oriel, £15; Queen's, £18; New College, £10 10s. (a percentage on provisions is charged); Magdalen, £19; Brasenose, £20; Corpus, £16 10s.; Christ Church, £24; Trinity, £20 (a percentage on provisions is charged); St. John's, £23 (a percentage on provisions is charged); Jesus, £10; Wadham, £18; Pembroke, £21; Worcester, £18; Keble, £81 (this includes board and lodging, but not washing, light, or beer during term); Hertford, £14; St. Mary Hall, £80 (including board and lodging, but not coals, lights, or washing; without board, £17); St. Alban Hall, £60 (including board and lodging, but not coals, lights, or washing); St. Edmund Hall, £81 (including board and lodging, but not coals, &c.; without board, £13); Charsley's Hall, £75 (including board, &c.; without this, £5). *Room, rent, and furniture*: When the charges for these are not included in the other fees, the amounts payable range from £10 to £40 per annum. In some cases furniture can be had from the college, in others it cannot. The charge for rooms ranges from £6 to £16 16s. per annum.

Degree Fees.—Keble, B.A., 10s.; Hertford, £5 5s. for each degree, with the exception of the Doctorate in any Faculty, for which the fee is £10 10s.; St. Mary Hall, B.A., £5—M.A., £4; St. Alban Hall, B.A., £2; St. Edmund Hall, B.A., £4 9s.—M.A., £4 9s.

Expenses of Unattached Students (not including the University Fees for Degrees.)—Matriculation (two fees), £5; caution money, £2; quarterly fee to the Delegates, 5s.—for the first three years, 17s. 6d.; for each subsequent quarter, 2s. 6d. *Degree fees (collegiate)*: Balliol, B.A., £4 4s.—M.A., £6 6s.; Merton, £2 for each degree taken; Exeter, B.A., £4 13s. 6d.—M.A., £4 5s.; Oriel, B.A., £4 2s. 6d.—M.A., £8 1s.; Queen's, B.A., £5 5s.—B. Mus., £2—D. Mus., £3—M.A., £3 6s.; New College, 10s. 6d. for each degree taken; Lincoln, B.A., £4 4s.—M.A., £4 4s.; Magdalen, B.A., 17s. 6d.—M.A., £3 5s.; Brasenose, B.A., £4 15s. 6d.—M.A., £8 0s. 6d.; Corpus, B.A., £1—M.A., 10s.; Christ Church, B.A., £3 3s.—M.A., £3 3s.; Trinity, B.A., £3 16s.—M.A., £6 1s.; St. John's, B.A., £6 7s. 6d.—M.A., £6 15s.; Wadham, B.A.,

£5 13s.—M.A., £8 4s.; Pembroke, B.A., £7—M.A., £5; Worcester, B.A., about £3—M.A., £5 1s., *plus* £4 4s. as an entrance fee to the common room in the case of any one not previously admitted to it.

For further information see the "University Calendar" and the "Student's Handbook to the University of Oxford," published at the Clarendon Press.

University of Cambridge.

None of the colleges of the University are open to women. Two establishments, one in Cambridge, at Newnham, the other at Girton—have been built for female students, and they under certain conditions are admitted to the University examinations.

There is no entrance examination in the University of Cambridge.

Plan of Examinations for the Ordinary B.A. Degree.

(1) A Previous examination held in the Easter and Michaelmas terms of each year, open to all students in their first or any later term of residence. (2) A General examination held towards the end of the Easter and Michaelmas terms in each year, open to all students who have entered on their fifth term at least, having previously kept four terms, and passed the Previous examination. (3) A Special examination in certain departments of Theology *or* Moral Science, *or* Law and Modern History, *or* Natural Science, *or* Mechanism and Applied Science, *or* Music—to be held in the Easter and Michaelmas terms of each year, open to all students who have entered on their ninth term, at least having previously kept eight terms, and have passed the Previous and General examinations.

Previous Examination.—It consists of two parts. The *first* embraces: (1) One of the Four Gospels in Greek; (2) One of the Latin Classics; (3) One of the Greek Classics; (4) Latin and Greek Grammar. The *second part* embraces: (1) Paley's Evidences; (2) Euclid; (3) Arithmetic; (4) Elementary Algebra. The examination is both written and *viva voce*. The oral examination is confined to the last-named subject.

The General Examination.—Subjects: (1) Acts of the Apostles in Greek; (2) One of the Latin Classics; (3) One of the Greek Classics; (4) Algebra; (5) Elementary Statics; (6) Elementary Hydrostatics.

Final or Special Examinations.—Subjects: (1) Theology—(*a*) Selected books of the Old Testament in the English version; (*b*) one of the four Gospels in the original Greek; (*c*) one or more of the Epistles in the Original Greek; (*d*) the Outlines of English Church History down to 1830; (*e*) A selected subject or period of English Church History. (2) Moral Science—(*a*) Topic; (*b*) Political Economy. (3) Law and

Modern History. (4) Natural Science—(*a*) Chemistry; (*b*) Botany; (*c*) Zoology; (*d*) Geology. (5) Mechanism and Applied Science—(*a*) Mechanics, including Statics, Dynamics, and Hydrostatics; (*b*) Heat; (*c*) Mechanism; (*d*) The General Principles of Machines; (*e*) The Theory of Structures; (*f*) the Strength of Materials; (*g*) The Principles of Levelling and Surveying; (*h*) Electricity and Magnetism. (6) Music—(*a*) Acoustics; (*b*) Counterpoint in not more than three parts; (*c*) Harmony in not more than four parts. There are three terms in each year. Every *student* must complete nine terms residence during two-thirds of each term either as a member of a college or as a non-collegiate student.

Master of Arts.—There is no examination for this degree. Candidates must have obtained the Bachelorship. The presentation of a thesis is required.

Faculty of Divinity.

A candidate for the degree of Bachelor of Divinity must be a Master of Arts of seven years' standing. A candidate for the degree of Doctor of Divinity must be a Bachelor of Divinity of not less than five years' standing.

Regulations for B.D. and D.D. Degrees.—A Master of Arts proceeding to the Bachelor's degree in Divinity must read a thesis before the University or have an original dissertation printed, and present copies to the University. A written examination has to be passed on subjects connected with the dissertation, as well as on other subjects in the Faculty of a more general nature. A Bachelor of Divinity proceeding to the Doctorate must print an original dissertation and present it to the authorities.

Faculty of Law.

A candidate for the Bachelorship in Law may take it at the same time as the ordinary B.A. The Law Tripos examination has to be passed, which "kills two birds with one stone," that is, it answers for the special B.A. and the Legal examination for the LL.B.

A Bachelor of Law may take the degree of Master of Law any time after the completion of three years from his inauguration. Masters of Law of five years' standing may proceed to the degree of Doctor of Law by publicly reading a thesis.

Music.

No candidate can be admitted to the Mus. Bac. degree unless he—(*a*) Have passed the Previous examinaton; (*b*) Produce evidence of having passed the Senior Local Examination of the University in the following subjects: English Grammar and Arithmetic; any two of

the following—English History, Geography, a work of some standard English writer, Political Economy, English Composition; one of the following—Latin, Greek, French, German, Euclid, Algebra. Failing evidence of having passed one of the above examinations, the candidate must show that he has passed the Higher Local Examination of the University or that of the Oxford and Cambridge Schools Examination Board.

The *Musical examination* itself consists of three parts, and no candidate is admissible to the second or third part until he has qualified in the previous part or parts. The *first part*: A *preliminary* examination in Acoustics, Counterpoint, and Harmony. This examination resembles the special test in Music given for the B.A. degree. The *second part*: The exercise, a composition on a sacred or a secular subject, written for the occasion, occupying about twenty minutes in performance, and fulfilling the following conditions: (*a*) That it comprise some portion for a solo voice, and some portion for a chorus of five real vocal parts; (*b*) That it comprise some specimens of canon and of fugue; (*c*) That the whole have an accompaniment for a band of bowed instruments (only), with or without organ. The *third part*: A more advanced examination in—(1) Counterpoint, in not more than five parts; (2) Harmony; (3) Canon in two parts; (4) Fugue in two parts, especially as to the relation of subject answers; (5) Form in Composition, as exemplified in the sonata; (6) The Pitch and Quality of the Stops of the Organ; (7) Such knowledge of the Quality, Pitch, and Compass of Orchestral Instruments as is necessary for reading from Score; (8) The Analysis of some Classical Composition, both with regard to Harmony and Form, the name of which is announced by the examiners at least six weeks before the date of the examination; (9) The playing at sight from Figured Bars and from Score. The examination is both written and *viva voce*.

Doctor of Music.—For the degree of Mus. D. a candidate is required: (1) To write an exercise; and (2) To pass an examination. (1) The exercise must be a composition on a sacred or a secular subject written for the occasion, occupying about forty minutes in performance, and fulfilling the following conditions: *a*, That it comprise some portion for one or more solo voices, and some portion for a chorus of eight real vocal parts; *b*, That it comprise some specimens of canon and of fugue; *c*, That it comprise an instrumental overture or an interlude, in the form of a first movement of a symphony or a sonata; *d*, That the whole (except some single piece be for voices alone) have an accompaniment for a full band. The *subjects of the examination* are: (1) Counterpoint in not more than eight parts; (2) The highest branches of Har-

mony; (3) Canon of various kinds in not more than four parts; (4) Fugue and Double Fugue in not more than four parts; (5) Form in Composition; (6) Instrumentation and Scoring of Chamber and Orchestral Music; (7) The analysis of some Classical Composition, the name of which is announced beforehand; (8) The Art of Music historically considered. The total *fees* for the Mus. B. are £11 6s.; for the Mus. D., £13 3s. Candidates for degrees in Music who enter as non-collegiate students pay to the Non-collegiate Students' Board a fee of £1 15s. when they enter, and £3 3s. when they are admitted to the degree of Mus. B.

Fees.—Examinations for the B.A. degree, £3 15s. *Caution Money*: A certain sum, varying from £10 to £50, is deposited by the student with the authorities of every college to which he is admitted; this is returned when the student's name is taken off the books. There are certain admission fees, differing at different colleges. The matriculation fees vary from 15s. (sizar) to £15 10s. (nobleman). The terminal payments for tuition are: Nobleman, £13 6s. 8d.; Fellow Commoner, £10; Pensioner, £6; Sizar, £2; Bachelor Fellow Commoner, £2 10s.; Bachelor of Arts, £1 10s. Such payments are made only during residence.

Fees for Degrees: For B.A. or LL.B., at times of general admission, £7; at any other time, £10 10s.; on admission to the degree of M.A. or LL.M., whether the candidate be a Fellow of a college or not, £12; M.B., £8; admission to the degree of a Bachelor of Arts or of Laws, £2; Mus. B., £5; LL.D., £20; M.D., £10; M.C., and with no previous degree, £18; when the candidate is B.A. or M.B., £12; when the candidate is B.A. and M.B., £6; when the candidate is M.A. or M.D., £1; for the Mus. D., when the candidate is Mus. B., £10; when no previous degree, £15. *College Fees for Degrees*: B.A., from £3 1s. to £5 1s.; M.A., £4 4s. to £8 1s.; B.D., £2 to £9 2s.; B.D., (ten year men), £4 1s. to £11 7s.; D.D., £8 to £16 4s.; B.L., £3 to £5 1s.; M.L., £4 4s. to £8 1s.; LL.D., £8 to £16 4s.; M.B., £4 to £16 9s.; M.C., £4 4s. to £11 9s.; M.D., £6 to £17 10s.; Mus. B., £4 to £10; Mus. D., £8 8s. to £12 7s.

Scholarships.

The Craven, Battie, Davies, and Pitt scholarships, are each tenable for seven years. The *Craven* are six in number, and are of the value of £80 per annum; one *Battie scholarship* of about £35 per annum; the *Brown scholarship* of £21 per annum; the *Davies scholarship* about £30; *Pitt scholarship* about £80; *Porson scholarship*, £65; *Waddington*, about £90; *Bell*, eight, between £50 and £60; *Thomas Barnes*, £60 (about); *Abbott scholarships*, two; *Tyrwhitt Hebrew scholarships*, six,

from £20 to £30; *Crosse*, three; *Whewell*, eight, four of £50 and four of £100; *Lightfoot*, three; *Lumley exhibitions*, ten of £15; *Sheepshank's Astronomical exhibition.*

Prizes.

Smith's, two, £23; *Chancellor's two gold medals* (Classical); Moral Philosophy, two, £15; *Chancellor's gold medal* (Legal); *Carus* (Greek Testament), two; *Evans'* (Hebrew Septuagint); *Scholefield, Adams*, £160; *Burney, Cobden*, £60; *Hare, Harness, Hulsean*, about £70; *Kaye, Le Bas, Maitland, Norrisian* (gold medal and books); *Seatonian*, £40; *Sedgwick, Yorke, Members'*, two of £31 10s.; *Browne medals*, three (gold); *Porson prize, Camden* and *Powis medals, Chancellor's English medal* (gold). *Winchester Reading prizes*: The prizes for the encouragement of literature, free and open to competition for the whole University, amount to upwards of £1500, three-fourths of which are given for Classics and English Composition. The amount of the annual prizes in the different colleges is about £800, more than half of which are given for the encouragement of Classical Literature. Full particulars of all scholarships and prizes will be found in the University Calendar, to be had of Bell and Sons, York-street, Covent Garden.

UNIVERSITY OF LONDON.

If after payment of a fee for any examination at the University of London, the candidate fails to pass or does not present himself, the fee will not be returned, but he will be allowed to present himself for one subsequent examination without extra fee provided he give notice of his intention fourteen days before the date of the examination. In the case of the examination for the Doctorate in Science, which takes place in June, notice must be given not later than the preceding 1st of April. In the case of the Doctorate in Laws, for which the examination takes place in January, such notice must be given not later than the preceding 15th of December.

Candidates for the Final B.A. examination are allowed three trials in all. The same rule applies to the First and Second examinations for the degree of Mus. B.

Instructions to Candidates.

Candidates are thus instructed:

Fees should not be sent by post.

Candidates entering their names for the examination for the first time should on no account send a notice of entry to the Registrar unaccompanied by the requisite document giving proof of age. No candidate, however old, is admitted to the examination without the production of such a document.

A certificate must in all cases be accompanied by a letter stating that the person to whom it relates wishes to enter for the examination.

The age of a candidate with regard to entry is reckoned from the first day of the several examinations, that day being computed to fall as late as the regulations will possibly allow. The two dates, in the case of the Matriculation examinations, are January 14th and June 21st. Candidates who *complete their sixteenth year* on either of those dates will therefore be admissible to the January or the June examination, as the case may be; but no further extension of time will be allowed.

Notice of entry should not be sent earlier than six weeks before the commencement of the examination.

The full marks obtainable at the Matriculation examination are 2,800. Of these 2,000 qualify for a prize, 1,800 for Honours, and 1,400 for the First Division. There is no regulation fixing the number of marks required for a pass. No further details as to the marking at this or other examinations can be furnished.

The Examination Papers of past examinations are not published separately, but the Papers of the previous academical year are printed in the University Calendar of the current year, which is issued annually at the beginning of April, and is to be obtained of the publishers, Messrs. Taylor and Francis, of Red Lion-court, Fleet-street, E.C. (Price 4s.)

Matriculation.

Candidates for any degree in this University (except graduates in Arts in the University of either Sydney or Melbourne) must have passed the Matriculation examination. No exemption from this rule is allowed on account of degrees obtained or examinations passed at any other than the above-named universities.

Every person entering upon articles of clerkship to an attorney matriculating in the First Division is entitled to exemption from one year's service.

This and all other examinations of the University of London, together with the prizes, exhibitions, scholarships, and medals depending upon them, are open to women upon exactly the same conditions as to men.

There are two examinations for Matriculation * in each year; one commencing on the second Monday in January, and the other on the third Monday in June.

No candidate is admitted to the Matriculation examination unless he has produced a certificate showing that he has completed his sixteenth

* These examinations may be held not only at the University of London, but also, under special arrangement (See Appendix I.), in other parts of the United Kingdom, or in the Colonies.

year. This certificate must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

A *fee* of £2 is payable at Matriculation. The examination is conducted by means of printed papers; but the examiners are not precluded from putting, for the purpose of ascertaining the competence of the candidate to pass, *vivâ voce* questions to any candidate in the subjects in which they are appointed to examine.

Candidates will not be approved by the examiners unless they have shown a competent knowledge in each of the following subjects, according to the details specified under the several heads: (1) Latin; (2) Any two * of the following languages: (*a*) Greek, (*b*) French, (*c*) German, and (*d*) either Sanskrit or Arabic †; (3) The English Language, English History, and Modern Geography; (4) Mathematics; (5) Natural Philosophy; (6) Chemistry.

The following are the particulars of the foregoing subjects of examination:

Languages.—Latin: One Latin subject to be selected by the Senate one year and a half previously from the works of the undermentioned authors: Virgil, one book of the Georgics and one book of the Æneid; Horace, two books of the Odes; Sallust, the Conspiracy of Catiline, or the War with Jugurtha; Cæsar, two books of the Gallic War; Livy, one book; Cicero, De Senectute or De Amicitiâ, with one of the following Orations—Pro Lege Manilià, one of the four Catilinarian Orations, Pro Archia, Pro M. Marcello; Ovid, one book of the Metamorphoses, and one book of the Epistles or Heroides. The paper in Latin contains passages to be translated into English, with questions in History and Geography arising out of the subjects of the book selected. Short and easy passages shall also be set for translation from other books not so selected. A separate paper shall be set containing questions in Latin Grammar, with simple and easy sentences of English to be translated into Latin. *Greek*: One Greek subject, to be selected by the Senate one year and a half previously from the works of the undermentioned authors: Homer, one book; Xenophon, one book. The paper in Greek contains passages to be translated into English, with questions in grammar, and with questions in History and Geography arising out of the subjects of the book selected. Short and easy passages are also set for translation from other books not so selected. *French*: The paper in French contains passages for translation into English, and questions in Grammar, limited to the accidence. *German*: The paper in German contains passages for translation into English, and questions in grammar, limited (except when German is taken as an alternative for Greek) to the accidence. *Sanskrit*; *Arabic*: The paper in Sanskrit and the paper in Arabic contain passages for

* No credit will be given for more than two of these languages.

† Candidates who desire to be examined in either Sanskrit or Arabic must give at least two calendar months' notice to the Registrar and must mention the other optional language which they select.

translation into English, and questions in grammar. *The English Language, English History, and Modern Geography*: Orthography; Writing from dictation; the Grammatical Structure of the Language; History of England to the End of the Seventeenth Century, with questions in Modern Geography.

Mathematics.—Arithmetic: The ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Extraction of the Square Root. *Algebra*: Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equations. *Geometry*: The first four books of Euclid, or the subjects thereof.

*Natural Philosophy.**—*Mechanics*: Composition and Resolution of Statical Forces; Simple Machines (Mechanical Powers)—Ratio of the power to the weight in each; Centre of Gravity; General Laws of Motion, with the chief experiments by which they may be illustrated; Law of the Motion of Falling Bodies. *Hydrostatics, Hydraulics, and Pneumatics*: Pressure of Liquids and Gases, its equal diffusion, and variation with the depth; Specific Gravity, and modes of determining it; the Barometer, the Syphon, the Common Pump and Forcing-Pump, and the Air-Pump. *Optics*: Laws of Reflexion and Refraction; Formation of Images by Mirrors and Simple Lenses. *Heat*: Its sources; Expansion; Thermometers—relations between different Scales in common use; Difference between Temperature and Quantity of heat; Specific and Latent heat; Calorimeters; Liquefaction; Ebullition; Evaporation; Conduction; Convection; Radiation. *Chemistry*: Chemistry of the Non-Metallic Elements, including their compounds as enumerated below—their chief physical and chemical characters—their preparation—and their characteristic tests:—Oxygen, Hydrogen, Carbon, Nitrogen—Chlorine, Bromine, Iodide, Fluorine—Sulphur, Phosphorus, Silicon; Combining Proportions by weight and by volume—General nature of Acids, Bases, and Salts—Symbols and Nomenclature; the Atmosphere, its constitution—effects of Animal and Vegetable life upon its composition; Combustion—Structure and properties of Flame—Nature and composition of ordinary Fuel; Water—Chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water; Carbonic Acid—Carbonic Oxide—Oxides and Acids of Nitrogen—Ammonia—Olefiant Gas, Marsh Gas, Sulphurous and Sulphuric Acids, Sulphuretted Hydrogen; Hydrochloric Acid—Phosphoric Acid and Phosphuretted Hydrogen—Silica.

The examinations are conducted in the following order:—

MONDAY.—*Afternoon*, 2 to 4—Latin; 4 to 6—Latin Grammar and Composition.

TUESDAY.—*Morning*, 10 to 1—Greek, German, Sanskrit or Arabic. *Afternoon*, 3 to 6—French or German.

WEDNESDAY.—*Morning*, 10 to 1—Arithmetic and Algebra. *Afternoon*, 3 to 6—Geometry.

THURSDAY.—*Morning*, 10 to 1—English Language. *Afternoon*, 3 to 6—English History.

* The questions in Natural Philosophy will be of a strictly elementary character.

FRIDAY.—*Morning*, 10 to 1—Natural Philosophy. *Afternoon*, 2 to 5—Chemistry.

On Monday morning, at nine o'clock, in the week next but two after the examination, the examiners publish a list of the candidates who have passed, arranged in alphabetical order. And on the Monday morning next following, at nine o'clock, they publish a list of the candidates who have passed, arranged in three divisions; in the Honours Division in the order of proficiency; in the First and Second Divisions, in alphabetical order.*

A Pass certificate, signed by the Registrar, is delivered to each candidate who may apply for it, after the report of the Examiners has been approved by the Senate.†

If, in the opinion of the Examiners, any candidates in the Honours Division of not more than twenty years of age at the commencement of the examination shall possess sufficient merit, the first among such candidates will receive an *exhibition* of £30 per annum for the next two years; the second an *exhibition* of £20 per annum for the next two years; and the third an *exhibition* of £15 per annum for the next two years; such exhibitions to be payable in quarterly instalments, provided that on receiving each instalment the exhibitioner shall declare his intention of presenting himself either at the two examinations for B.A., or at the two examinations for B.Sc., or at the First LL.B. examination, or at the Preliminary Scientific and First M.B. examinations, within three academical years‡ from the time of his passing the Matriculation examination.

Under the same circumstances, the fourth among such candidates will receive a *prize* to the value of £10 in books, philosophical instruments, or money; and the fifth and sixth each a *prize* to the value of £5 in books, philosophical instruments, or money.

Any candidate who may obtain a place in the Honours Division at the Matriculation examination in January is admissible to the First B.A. or to the First B.Sc. examination in the following July.

Provincial Examinations.—These examinations are appointed by the

* The places of candidates in the Honours Division are determined by their respective degrees of proficiency in the subjects of the Pass Examination taken collectively.

† Certificates cannot generally be issued until about three weeks after the announcement of the results of each examination. A candidate may apply for his certificate personally or by letter; or may furnish some other person with written authority (which must be produced) to receive it on his behalf.

‡ By the term "academical year" is ordinarily meant the period intervening between any examination and an examination of a higher grade in the following year; which period may be either more or less than a calendar year. Thus the interval between the First examinations in Arts, Science, and Medicine, and the Second examinations of the next year in those Faculties respectively, is about sixteen months; whilst the interval between the Second B.A. examination and the M.A. examination of the next year, or between the second B.Sc. examination and the D.Sc. examination of the next year, is less than eight months. Nevertheless, each of these intervals is counted as an academical year.

Senate from time to time, upon the application of any city, institution, or college desiring to be named as a local centre for one or more examinations; and are carried on simultaneously with the examinations in London, under the supervision of sub-examiners also appointed by the Senate. Candidates wishing to be examined at any provincial centre must give notice of entry (naming the centre they select, and inclosing their certificates of birth) to the Registrar of the University of London, who will make all necessary arrangements.

A fee, varying from £1 to £2, is usually charged by the local authorities, in addition to the University fee. Both fees are payable on registration, which takes place at the provincial centres at a time and place of which due notice is sent to candidates.

The answers of the candidates at the provincial examinations are reviewed by the examiners at the same time with the answers of the candidates examined in London; and a list of the candidates who have passed at each provincial examination is published, at the time fixed by the Regulations, at the place where such examination has been held.

Scholarships, &c.—Gilchrist scholarships, exhibitions, and prizes: I. *British scholarships, &c.*—(*a*) *For Male Candidates*: 1. A scholarship of the value of £50 per annum, and tenable for three years, is annually awarded to the candidate from the Royal Medical College, Epsom, who at the June Matriculation examination stands highest among the candidates approved by the Head Master of that institution, and who passes either in the Honours List or in the First Division; on condition of his prosecuting his studies during the tenure of his scholarship with a view to graduation in one of the Faculties of the University of London. Particulars may be obtained on application to the Secretary of the Royal Medical College, 37, Soho-square, W. 2. A similar amount is annually offered to candidates intending to pursue, at Owens College, Manchester, their studies for graduation in one of the Faculties of the University of London; a single scholarship of £50 per annum for three years being awarded to the highest of those candidates at the June Matriculation examination who has been previously approved by the Principal of Owens College, provided that he pass in the Honours Division; or, in case no candidate should so pass, two scholarships, each of £25 per annum, being awarded to the two candidates as aforesaid who stand highest in the First Division. Particulars may be obtained on application to the Principal of Owens College, Manchester. (*b*) *For Female Candidates*: 1. Two exhibitions, one of £30, the other of £20 per annum, tenable for two years, will be awarded at the June Matriculation examination to the two female candidates of not more than twenty years of age at the commencement

of the examination who pass highest in the Honours Division; to assist them in pursuing their studies at some collegiate institution approved by the Gilchrist Trustees. 2. Two exhibitions, one of £40, the other of £30 per annum, tenable for two years, are awarded to the two female candidates who pass highest at the First B.A. examination (provided that they obtain in the one case at least two-thirds, and in the other at least three-fifths, of the total number of marks); to assist them in pursuing their studies at some collegiate institution approved by the Gilchrist Trustees. 3. A gold medal of the value of £20 (or a book prize of the same value) is awarded to the female candidate who passes highest at the Second B.A. examination, provided she obtain not less than two-thirds of the total number of marks. Further particulars may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

II. *Indian Scholarships.*—Two scholarships, each of the value of £100 per annum, and tenable for four years, are annually awarded to the two native candidates who pass highest in the January Matriculation examination carried on at Calcutta, Bombay, and Madras; provided that such candidates pass either in the Honours or in the First Division, are not more than twenty-two years of age, and are desirous of prosecuting their studies, either at the University of Edinburgh or at University College, London, with a view to graduation in one of the Faculties of the University of London. Further particulars of the Indian scholarships may be obtained on applicatian to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

III. *Colonial Scholarships.*—1. A scholarship of the value of £100 per annum, and tenable for three years, is annually awarded to the highest among those candidates at the June Matriculation examination carried on in the Dominion of Canada, who pass either in the Honours or in the First Division, are not more than twenty-two years of age, and are desirous of prosecuting their studies either at the University of Edinburgh, or at University College, London, with a view to graduation in one of the Faculties of the University of London. 2. A similar scholarship, under the same conditions, is annually awarded to the candidate who passes the highest at the January Matriculation examination carried on in the West India Colonies. 3. A similar scholarship, under the same conditions, is biennially awarded to the candidate who passes highest at the June Matriculation examination carried on at Hobart Town, Tasmania. 4. A similar scholarship, under the same conditions, is biennially awarded to the candidate who passes highest at the June Matriculation examination carried on in New Zealand.

5. A scholarship of £100 per annum, tenable for three years, is biennially awarded to the Bachelor of Arts of the University of Sydney who may be nominated by the authorities of that University, and who is desirous of prosecuting his studies either at the University of Edinburgh or at University College, London, with a view to graduation in one of the Faculties of the University of London. (*Note.*—Every Candidate for a Colonial scholarship must either be a native of the colony in which he presents himself, or have resided therein for the five years immediately preceding.) Further particulars of the Colonial Scholarships may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

West Scholarship. — This scholarship, of the value of £30, and tenable for one year, is awarded by the Council of University College, London, to that candidate at the June Matriculation examination who distinguishes himself the most in English.—Further particulars may be obtained of the Secretary of University College, Gower-street, London, W.C.

Tuffnell Scholarships.—Two scholarships, of the value of about £100 each, and tenable for two years, are awarded by the Council of University College for distinction in Analytical and Practical Chemistry, and in General Chemistry, alternately, to that student of the College, being an undergraduate of the University of London of not more than three years' standing, who shall pass the most distinguished examination in the subjects for which the scholarship is conferred, and shall evince sufficient merit to entitle him to the scholarship.—Further particulars may be obtained of the Secretary of University College, Gower-street, London, W.C.

Reid Studentship for Women.—A free studentship at Bedford College, tenable for two years, of the annual value of £25, is offered by Mrs. Reid's Trustees to the woman passing highest in the Honours Division of the June Matriculation examination, and desiring to pursue the course for the B.A. or B.Sc. Degree.—For further particulars apply to Mrs. Reid's Trustees, Bedford College, 8, York-place, Portman-square, W.

*Bachelor of Science (B.Sc.).**

Candidates for the degree of Bachelor of Science are required to pass two examinations.†

* The Pass examinations may be held not only at the University of London, but also, under special arrangement, in other parts of the United Kingdom.—The Honours Examinations are held in London only.

† Bachelors of Arts of this University who become candidates for the degree of Bachelor of Science are exempted from examination in Pure and Mixed Mathematics at the First B.Sc. examination (unless they wish to present themselves for honours in any subject), and from payment of the fee of £5 at the Second B.Sc. examination. They are also allowed to present themselves at both the First and the Second B.Sc. examinations in the same year.

First B.Sc. Examination.—The First B.Sc. Examination takes place once in each year, commencing on the third Monday in July. No candidate (with the exception of such as have obtained Honours at the Matriculation examination in the preceding January) is admitted to this examination within one academical year of the time of his passing the Matriculation examination; nor is any candidate admitted unless he produces a satisfactory certificate of good conduct, which is to be transmitted to the Registrar at least one calendar month before the commencement of the examination.

The *fee* for this examination is £5, previously to be paid to the Registrar.

The examination is in the following subjects: *

PURE MATHEMATICS.—*Arithmetic.*—The ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; the Rule of Three, and its applications; Simple and Compound Interest; Present Value, Discount, and Annuities; Extraction of the Square Root; nature and use of Logarithms.

Algebra.—The ordinary Rules; reduction, and manipulation of Algebraical Fractions; Ratio, Proportion, and Variation; Permutations and Combinations; Arithmetical and Geometrical Progressions; Simple and Quadratic Equations; Determination of Common Factors.

Geometry.—The relations and properties of Similar Rectilinear Figures; Elementary Properties of the Plane, including those of the Angles made by Planes with Right Lines and with each other; Elementary Properties of the Sphere, including those of the Great and Small Circles on the Surfaces of Spheres; Mensuration of the simpler Plane and Solid Figures, including that of the Circle, the Sphere, the Cylinder, and the Cone; Elements of Co-ordinate Geometry, in Rectangular and Polar Co-ordinates, as far as the Equations and Properties of the Right Line and Circle.

Trigonometry.—The different Measurements of Angles, and the ordinary relations of their Trigonometrical Ratios; the Elementary Formulæ connecting the Trigonometrical Ratios of two or more Angles; the Solution of the several cases of Plane Triangles, including the determination of their Areas; the determination of the Heights and Distances of Inaccessible Objects.

MIXED MATHEMATICS.—The questions put under this head will be such as may be answered by simple mathematical methods.—Composition, Resolution, and Equilibrium of Concurrent Forces; Composition, Resolution, and Equilibrium of Parallel Forces; the Centres of Gravity of Rigid Bodies; the Mechanical Powers: the Measures of Velocity, Acceleration, and Force;

* Candidates who pass in all the subjects of the Preliminary Scientific (M.B.) examination, and who either pass at the same time in the Pure Mathematics of the First B.Sc. examination, or have previously passed the First B.A. examination, are admissible to the Second B.Sc. examination.—One Fee of £5 paid on entering for the Preliminary Scientific examination, admits a candidate to the First B.Sc. Mathematics also, if taken at the same time.

the Accelerations of Masses under the action of Forces; the Laws of Rectilinear Motion; the Rectilinear Motion of Particles under the action of Gravity.

INORGANIC CHEMISTRY.—Differences between Mechanical Mixture, Solution, and Chemical Combination—Outlines of Crystallography—Formation of crystals—Dimorphism—Isomorphism—Conditions on which the melting-point and the boiling-point of a substance depend—Difference between elementary and compound substances—Laws of chemical combination—Equivalent weights of the elements—Multiple Proportions—The Atomic Theory—Atomic Value (Quantivalence)—Molecules—Molecular weights—Relation between the density of a gas and its molecular weight—Abnormal Densities—Avogadro's hypothesis—Combination of Gases by volume—Compound Radicals—Atomic and Molecular combination; Meaning of Chemical Symbols, Formulæ, and Equations—Calculation of quantities by weight and by volume—Chemical changes, and the conditions under which they occur—Combination—Decomposition—Double decomposition—Nature of Acids, Bases, and Salts—Capacity of saturation of acids and bases—Nomenclature; Relation between Atomic Weight and Specific Heat—Faraday's Electrolytic Law—Principles of Spectrum Analysis—Diffusion of Gases; Hydrogen, Chlorine, Bromine, Iodine, Fluorine—The combinations of the last four elements with Hydrogen; Oxygen—Ozone—Water and Peroxide of Hydrogen—The oxides and oxyacids of Chlorine—Chlorates and Hypochlorites—Sulphur—Sulphuretted Hydrogen—the oxides of Sulphur—Sulphuric Acid and the Sulphates—Sulphurous Acid and the Sulphites—Chloro-sulphuric Acid; Nitrogen—the Atmosphere, and its relations to animal and vegetable life—Ammonia—Ammonium and its salts—the oxides of Nitrogen—Nitric Acid and Nitrates—Nitrous Acid and Nitrites—Phosphorus—Phosphoretted Hydrogen—the oxides of Phosphorus—Phosphoric Acid and the Phosphates—Chloride and Oxychloride of Phosphorus—Arsenic and its oxides—Arseniuretted Hydrogen—Arsenious Acid and its Salts—Arsenic Acid and its Salts—The Sulphides of Arsenic—Detection of Arsenic—Antimony, its oxides and sulphides—Antimoniuretted Hydrogen—Chlorides of Antimony—Compounds of Antimonic Oxide—Detection of Antimony; Boron—Boracic acid and the Borates; Carbon—Carbonic oxide and Carbonic acid—the Carbonates—Carbon Oxysulphide—Sulphocarbonic Acid—Marsh Gas—Ethylene—Combustion—Structure of Flame—Coal Gas—Davy Lamps—Principles of Illumination—Silicon—Siliciuretted Hydrogen—Silicon Chloride—Silicon Chloroform—Silica and the Silicates; Potassium—Sodium—Silver; Calcium—Strontium—Barium; Aluminium; Magnesium—Zinc—Cadmium; Lead; Manganese—Iron—Cobalt; —Nickel—Chromium; Bismuth—Copper—Mercury—Gold—Tin; Platinum; the chief compounds of these metals with the more important acid radicals—The detection of these metals, and their compounds, in powder or in solution.

EXPERIMENTAL PHYSICS.—Candidates will be expected to show a general acquaintance with the methods and apparatus by which the leading principles of Physics, as enumerated below, can be illustrated and applied. Units of

Measurement; the Laws of Motion considered experimentally; the chief Forces of Nature; the general properties of Solids, Liquids, and Gases; the nature, intensity, and transmission of Fluid Pressure in general; the Pressure of Liquids in Equilibrium under the action of Gravity; the Equilibrium of Solids floating or entirely immersed in gravitating Fluids—the Specific Gravities of substances, with the ordinary modes of determining them; Measurement of the Pressure of the Atmosphere and of the elastic force of Gases; Diffusion of Liquids and Gases; Definition of Work and Energy; Conservation and Transmutation of Energy.

Acoustics.—Production and mode of Propagation of Sound; Intensity, Pitch, and Quality; Velocity of Sound in Air; Influence of Temperature and Density; Velocity of Sound in other Media; Laws of Reflexion and Refraction; Nature of Musical Sounds; Longitudinal Vibrations of Rods and of Columns of Air; Transverse Vibrations of Strings—Variation in their Rate of Vibration by changes in their tension, length, thickness, and substance.

Heat.—Definitions of Heat and Temperature; Construction of Instruments for the Measurement of Temperature; Expansion of Solids, Liquids, and Gases under Heat; Change of State—Tension of Vapours—Latent Heat; Radiant Heat, its reflexion, refraction, and absorption; Conduction—definition of Thermal Conductivity; Convection; Specific Heat—Mechanical Equivalent of Heat.

Magnetism.—Properties of Magnets—Induction—Magnetic relations of Iron and Steel; Terrestrial Magnetism.

Electricity.—Two Electrical States—and their mutual relations; Conduction and Insulation; Induction; Electric Attraction and Repulsion; Distribution and Accumulation of Electricity on Conductors; Electric Discharge; Voltaic Electricity—the various Batteries; Electromotive Force, Strength of Currents, Resistance—Ohm's Law; Heating and Chemical effects of Electric Currents; Action between Currents and Magnets—Electro-Magnetism; Induced Currents—Magneto-Electricity; Thermo-Electricity.

Optics.—Laws of Propagation of Light—Measurement of Velocity of Light—Photometry; Laws of Reflexion and Refraction of Light; Reflexion at Plane and at Spherical Surfaces; Refraction at Plane and at Spherical Surfaces; Refraction through Lenses, including the formation of Images; Chromatic Dispersion.

General Biology.—Structure, Functions, and Life-history of simple Unicellular Plants, such as Protococcus and Saccharomyces (Yeast) as types of Vegetable Life; Structure, Functions, and Life-history of Penicillium, Mucor, or some other simple Fungus; Structure, Functions, and Life-history of Chara or Nitella; Morphology, Histology, and History of the reproduction of a Fern; Morphology and Histology of a Flowering Plant—structure of a flower—homologies of leaves and floral organs—histology of ordinary vegetable tissues, such as epidermis, parenchyma, fibro-vascular tissue, and their arrangement in the stem and leaves; Growth of a Flowering Plant—formation of wood and

bark—nature of cambium; Reproduction of a Flowering Plant—structure of ovule—methods of fertilisation—development of ovule into seed; General Principles of Vegetable Nutrition—food of plants—action of green parts of plants—nature and flow of sap; Structure, Functions, and Life-history of the following animals, as types of some of the chief divisions of the Animal Kingdom—Amœba, Vorticella, Hydra, Earthworm, Mussel, Snail, Lobster or Crayfish, Frog; General Histology of chief Animal Tissues—blood—pavement, columnar, ciliated, and glandular epithelium—connective tissue—cartilage—bone—muscle—nerve-fibres and nerve-cells; General Physiology of Circulation, Respiration, and Digestion in the Frog, together with the fundamental properties of muscle, nerve, and the spinal cord; Reproduction of Frog, and chief phases in life of Tadpole.

In the following week, on Monday and Tuesday, commencing at 10 a.m.: Chemistry by *vivâ voce* interrogation and experiment—Qualitative Analysis—Detection of the more commonly occurring Bases and Inorganic Acids in given compounds—each substance to contain not more than one Base and one Acid.

On Wednesday and Thursday, from 10 a.m. to 1 p.m., and from 2 p.m. to 5 p.m.: Practical Examination in Biology. Each candidate must be prepared to examine microscopically, to dissect, and to describe, specimens of the plants and animals referred to in the preceding Syllabus.

Candidates will not be approved by the examiners unless they have shown a competent knowledge in—1. Pure and Mixed Mathematics; 2. Experimental Physics; 3. Chemistry; 4. General Biology.

On Saturday morning, at nine o'clock, in the week following that in which the examination commenced, the Examiners will publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. And a Pass Certificate, signed by the Registrar, will be delivered to each candidate who shall apply for it, after the Report of the Examiners shall have been approved by the Senate.*

Examination for Honours.—Any candidate who has passed the First B.Sc. examination in all its subjects may be examined at the Honours examination next following the first B.Sc. examination at which he has passed, for Honours in (1) Mathematics, (2) Experimental Physics, (3) Chemistry, (4) Botany, and (5) Zoology; unless he have previously obtained the Exhibition in Mathematics at the First B.A. examination, in which case he will not be admissible to the examination for Honours in that subject; or unless he have previously obtained an exhibition at the Preliminary Scientific (M.B.) examination in any of the subjects

* The Report cannot, usually, be laid before the Senate until towards the end of October.

which are common to it with the First B.Sc. examination, in which case he will not be admissible to the examination for Honours in that subject.

Candidates for Honours in *Mathematics* are examined in the following subjects: Algebra; Theory of Equations; Plane Trigonometry; Spherical Trigonometry; Pure and Co-ordidate Geometry of two Dimensions, up to and including the properties of the Conic Sections; Differential Calculus; Integral Calculus; Statics of Material Particles, of Rigid Bodies, of Flexible Cords, and of Elastic Beams; Kinetics of Material Particles; Hydrostatics of Gravitating Fluids. This examination takes place on Monday, Tuesday, and Wednesday, in the second week after that in which the Pass examination commenced; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes according to their respective degrees of proficiency.

Candidates for Honours in *Experimental Physics* are examined in the subjects of the Pass examination, treated more fully. This examination takes place on Monday in the week following the examination for Honours in Mathematics; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a class list.

Candidates for Honours in *Chemistry* are examined in Inorganic Chemistry, treated more fully than in the Pass examination. In addition they are examined practically in Simple Qualitative Analysis. This examination, which consists of six hours' examination by printed papers, and of six hours' practical work, takes place on Thursday and Friday (with Saturday if necessary) in the same week with the examination for Honours in Mathematics, commencing on each day at 10 a.m. In the course of the following week the examiners publish a class list.

Candidates for Honours in *Botany* are examined in any of the following subjects, at the option of the examiners: Vegetable Histology; Vegetable Morphology; Vegetable Physiology (including Development); Systematic Botany; the Structural and Physiological Characters of the principal Natural Orders of the Vegetable Kingdom. This examination, which consists of six hours by printed papers and six hours' practical work, takes place on Tuesday and Wednesday in the week following the examination for Honours in Mathematics, commencing on each day at 10 a.m. The examiners publish a class list in the following week.

Candidates for Honours in *Zoology* are examined in any of the following subjects, at the option of the examiners:—

The Typical Structure and mode of Development, with the chief deviations from each, of every Class in the Animal Kingdom. Candidates may also be tested practically by description of the whole or parts of skeletons and skulls, and by dissection of animals selected from the following lists, as well as by further examination in the subjects prescribed by the Practical part of the Pass examination.

Skeletons and Skulls for Description: Galeus (cartilaginous, in spirit)—Salmo—Chimæra—Protopterus—Rana—Monitor—Chelone—Columba—Echidna—Lepus—Canis (skull only)—Sus (skull only)—Felis tigris (skull only)—Ovis (skull only)—Platyrrhine Monkey (skull only)—Catarrhine Monkey (skull only)—Homo.

Animals for Dissection: Hydra—Cordylophora—Aurelia—Alcyonium—Lumbricus—Tubifex—Nereis—Sipunculus—Hirudo—Anodon—Mya—Helix—Paludina—Patella—Sepia—Astacus—Cancer—Lepas (demonstration of appendages only required)—Oniscus (appendages only)—Blatta—Musca—Julus (appendages only)—Scolopendra (appendages only)—Ascaris—Ascidia—Amphioxus—Perca—Raia—Rana—Columba—Lepus.

This examination, which consists of six hours by printed papers and six hours' practical work, takes place on Thursday and Friday in the week following the examination for Honours in Mathematics, commencing on each day at 10 a.m. The examiners publish a class list in the course of the following week. The candidate of not more than twenty-two years of age at the commencement of the Pass examination, who has passed either the First B.Sc. examination or the First B.A. examination, if of sufficient merit, and who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination in *Mathematics*, receives an exhibition of £40 per annum for the next two years, payable in quarterly instalments (it being intended that one exhibition only shall be given among all the candidates, although some of such candidates may have passed the First B.Sc. examination and others the First B.A. examination); provided that on receiving each instalment he declare his intention of presenting himself at the Second examination within two academical years from the time of his passing the First examination for the same degree, whether B.Sc. or B.A., as the case may be.

If in the opinion of the examiners any candidate of not more than twenty-two years of age at the commencement of the Pass examination, who has passed either the First B.Sc. examination or the Pre-

liminary Scientific (M.B.) examination, possess sufficient merit, the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination, in *Experimental Physics*,* the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination, in *Chemistry*, the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination, in *Botany*, and the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination, in *Zoology*, receive each an exhibition of £40 per annum for the next two years, payable in quarterly instalments (it being intended that one exhibition only be given in each case among all the candidates, although some of such candidates may have passed the First B.Sc. examination and others the Preliminary Scientific (M.B.) examination); provided that on receiving each instalment he declare his intention of presenting himself either at the Second B.Sc. examination within two academical years from the time of his passing the First B.Sc. examination, or at the First M.B. examination within three academical years from the time of his passing the Preliminary Scientific (M.B). examination, as the case may be.

Under the same circumstances, the First and Second candidates for Honours in Experimental Physics each receive a *Neil Arnott bronze medal.*

Second B.Sc. Examination.—The Second B.Sc. examination takes place once in each year, commencing on the third Monday in October. Every candidate is required to have passed the First B.Sc. examination at least one academical year previously; he is also required to produce a satisfactory certificate of good conduct, which must be transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, to be previously paid to the Registrar. Candidates are required to show a competent knowledge of any three which they may select out of the nine following subjects: †

* The exhibition in Experimental Physics, having been provided by the liberal endowment of the late Dr. Arnott, will be entitled "The Neil Arnott Exhibition."

† Candidates are not allowed to offer themselves for examination in more than three subjects; and they must, when forwarding their certificates or notices, mention the subjects they select.

I. PURE MATHEMATICS.—*Algebra*: Theory of Indices, Radicals, and Surds; Theory of Imaginary Quantities; Binomial Theorem, and its Applications; Theory of Logarithms. *Trigonometry*: Ordinary Formulæ connecting the Sides and Angles of Spherical Triangles; Solution of the several cases of Spherical Triangles, including the determination of their Areas. *Geometry*: The Properties of the Conic Sections, by Pure and Co-ordinate Geometry. *Differential Calculus*: Differentiation of Functions of a Single Variable; Taylor's and Maclaurin's Theorems, with their Applications; Theory of Maxima and Minima for Functions of a Single Variable; Applications to Tangents and Normals of Plane Curves. *Integral Calculus*: Integration of Functions of a Single Variable in finite terms; Reduction of Integrals of Functions of a Single Variable; Applications to Rectification and Quadrature of Plane Curves.

II. MIXED MATHEMATICS.—*Dynamics*: Composition, Resolution, and Equilibrium of Moments; Equilibrium of Rigid Bodies, of Jointed Bars, and of Flexible Cords; Equilibrium of Incompressible Fluids, and of Solids floating in Gravitating Fluids; Principle of Virtual Velocities, with its Applications; Elementary Laws of Friction, and of Resistance to Rectilinear Motion in Fluid Media; Composition and Resolution of Velocities and Accelerations; Uniform Motion in a Circle, Harmonic Vibration, and Centrifugal Force; Curvilinear Motion of a Particle, free or constrained, under the action of Gravity, of Central Force, or of any Forces; Vibrations of a simple Pendulum under the action of Gravity; Impact of uniform Spheres against fixed Planes, and against each other; Moments of Inertia of Rigid Bodies with respect to Fixed Axes; Uniform Rotation of Rigid Bodies about Fixed Axes; Rotation of Rigid Bodies about Fixed Horizontal Axes under the action of Gravity; Theory of Mechanical Work, and of Energy, Actual and Potential. *Astronomy*: Points, Lines, Planes, and Circles of the Celestial Sphere; Phenomena depending on the Earth's Rotation round her Axis; Phenomena depending on the Earth's Revolution round the Sun; Phenomena depending on Change of Place on the Surface of the Earth; Determination of Place and Time on the Surface of the Earth; Parralax—diurnal and annual—causes, effects, and determination of; Refraction and Aberration—causes, effects, and determination of; Precession and Nutation—causes, effects, and determination of; Kepler's Laws of Planetary Motion, and their consequences; Determination of the Magnitude and Figure of the Earth, of the Extent and Form of the Lunar Orbit, and of the Dimensions and Configuration of the Solar System; Determination of the particulars of Eclipses, Solar and Lunar, and of Transits of the Interior Planets across the disk of the Sun.

III. EXPERIMENTAL PHYSICS.—The subjects prescribed for the First B.Sc. Pass examination, with the addition of the following; the whole being treated mathematically, as well as experimentally, so far as the Mathematics of the First B.Sc. Pass examination are applicable: Friction; Elasticity of Solids, Liquids, and Gases; methods of Measurement; Capillarity; Connexion between Energy and Velocity. The various energies and their Trans-

mutations; Conservation and Dissipation of Energy. *Acoustics*: Indirect methods of measuring Velocity of Sound; Transverse Vibrations of Rods; Tuning-forks; Vibrations of Plates and Membranes; Musical Intervals; Composition of Vibrations—Beats; Interference; Resonance; Harmonics; Quality of Musical Sounds; Methods of analysing Complex Sounds. *Heat*: Methods of measuring Specific Heat, Coefficients of Expansion, Tension of Vapours, and Latent Heat, with the chief results that have been obtained; Relation between Emission and Absorption of Radiant Heat—Theory of Exchanges—Laws of Cooling—Variation with Temperature of Quality and Quantity of Radiation; Measurement of Coefficients of Conductivity and their variation with Temperature; Laws of Thermodynamics and their principal Applications. *Optics*: Optical description of the Eye, and Theory of unaided Vision; Vision through Lenses, Microscopes, and Telescopes; Spectrum-Analysis; Conditions of Achromatism in thin Compound Prisms and Lenses; The Wave Theory, its explanation of Reflexion and Refraction; Interference, Double Refraction, and Polarization; Nicol's Prism; Interference of Polarized Light; Rotatory Polarization. *Magnetism*: Magnetic Moments, and methods of comparing them; the methods of determining the Dip, Total Intensity, and Magnetic Declination, at any place; Secular and Diurnal Variations; Disturbances and their Laws; Connexion between Magnetic Disturbances and other phenomena; Diamagnetism. *Electricity*: Measurement of Electrical Density, Capacity, Quantity, and Potential; Centimetre-gramme-second system of Units; Theory of Voltaic Battery; Measurement of Electromotive force, Current, and Resistance; Action of Currents on Currents.

IV. CHEMISTRY.—*Inorganic Chemistry*, treated more fully than at the First B.Sc. examination. *Organic Chemistry*: Detection and estimation of Carbon, Hydrogen, Nitrogen, and Sulphur in Organic Compounds—Calculation of Empirical formulæ from percentage composition—Determination of Molecular Weight of organic bodies—Compound Radicals—Mode in which the atoms are supposed to be united in the molecule—Types—The Valency of Compound Radicals in Relation to the Valency of the Constituent Atoms—Saturated and Non-saturated Compounds; Isomerism — Metamerism — Polymerism — Homologous series—Classification of the Carbon Compounds; The general action of Chlorine, Nitric acid, Sulphuric acid, Chromic acid, Nascent Hydrogen, Potash, and the Chlorides of Phosphorus, on the principal groups of Carbon Compounds; Fermentation—Decay; Synthesis of the following—Urea—Ethyl Alcohol—Tartaric Acid—Alizarine; Derivatives of the series $C_n H_{2n+2} O$; Marsh-gas—Ethyl hydride—A special knowledge of Methyl and Ethyl Alcohols and their chief derivatives, particularly Ethers, Acetic Aldehyde, Formic and Acetic acids, with Acetone, and Isopropyl-alcohol, will be required; also a general acquaintance with the higher Alcohols and their chief derivatives; The Ethylamines—Tetraethylammonium—Cacodyl—Zinc methyl—Silicon ethyl—Ethylene and its chief derivatives—Glycol—Glycolic acid—Lactic acid—Glyoxal—Oxalic acid—Succinic acid—Malic acid—Tartaric acid—Citric acid—Cyanogen and its com-

pounds—Prussic acid—Cyanides and Double Cyanides—Cyanic and Cyanuric acids—Sulphocyanides—Ureas; Uric acid—Guanidine—Glycocyamine—Glycocyanidine — Sarkine — Creatine — Theobromine — Caffeine; Glycerine and Allyl Alcohol, their chief derivatives — Constitution of Fats and Oils—Erythrite—Mannite—Glucose and Levulose—Cane-sugar—Milk-sugar—Cellulose—Starch—Glycogen—Dextrine; Aromatic compounds—Benzene—Toluene—Phenol—Cresol—Hydroquinone—Resorcin—Pyrocatechin—Pyrogallic acid—Oil of Bitter Almonds—Benzyl-alcohol—Benzoic acid—Benzophenone—Hippuric acid—Salicylic acid and Isomeric acids—Oxysalicylic acid—Gallic acid—Phtalic acid and Isomeric acids—Styrol (Cinnamic alcohol)—Nitrobenzene—Aniline—Toluidine—Rosaniline—Diazobenzene and its compounds—Naphthalene—Anthracene—Oxanthraquinone—Alizarine—Indigo and Indol—Cymene—Camphor and Terpenes; Glucosides—Amygdaline—Salicine—Tannine; Alkaloids—Conine—Nicotine—Morphine—Strychnine—Quinine—Cinchonine; Taurine—Lecithin—Choline — Albumin — Fibrin — Casein. *Practical Examination — Qualitative Analysis*: Substances will be given for analysis containing not more than two acids and two bases, organic or inorganic, but not more than one organic acid and one organic base. The inorganic acids and bases to be those embraced in the First B.Sc. Practical examination; the organic acids and bases to be selected from the following list: Oxalates, Acetates, Benzoates, Succinates, Tartrates, Urates, Gallates, Tannates, Cyanides, Double Cyanides, Alcohol, Starch, Grape-sugar, Urea, Morphia, Quinine, Strychnine.

V. Botany.—*Histology*: The Structure of the Cell; the Chemical and Physical properties of Protoplasm; the nature and mode of origin of the Cell-sap, chlorophyll, corpuscles, starch, and aleurone-grains, raphides; the chemical and physical properties of the Cell-wall, and the mode in which it is added to; the Formation and Growth of Plant-tissues by Cell-division; the Differentiation of Primitive tissue into Epidermal, Fibro-vascular, and Fundamental tissues. *Morphology*: The points of Structure and Development which essentially characterise the following groups: *Angiosperms*: Ranunculaceæ, Cruciferæ, Caryophyllaceæ, Violaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Umbelliferæ, Compositæ, Scrophulariaceæ, Solanaceæ, Labiatæ, Primulaceæ, Amentaceæ, Orchidaceæ, Liliaceæ, Cyperaceæ, Graminæ; *Gymnosperms*—Coniferæ, Cycadeæ; *Cryptogams*—Selaginellæ, Lycopodiaceæ, Rhizocarpeæ, Filices, Equisetaceæ, Hepaticæ, Musci, Characeæ, Floridæ, Basidiomycetes, Ascomycetes, Lichenes, Fucaceæ, Volvocineæ, Peronosporeæ, Conjugatæ, Mucorini, Confervaceæ, Myxomycetes, Palmellaceæ, Oscillatoriæ, Saccharomyces, Schizomycetes; the Taxonomic relations of these Groups, and their distribution in Time and Space. *Physiology*: The materials of Plant Food—the organs by which they are absorbed; the Movements of Water and Gases in Plants; the general nature of the changes by which the Food-materials are converted into the materials of the Tissues—their Distribution throughout the Plant; Respiration; the influence of Light and Temperature upon Plants; Growth—Heliotropism—Geotropism—twining of Stems and Tendrils; Periodic movements—Irritability; General

phenomena of Sexual Reproduction—Hybridization—Dichogamy—Causes of Variation—Origin of Species. *Practical examination*: Each candidate must be prepared to dissect, and to examine with the simple or compound microscope, or with both, any plants or parts of plants placed before him, selected with reference to their typical character as representing their respective groups; and to write descriptions of them.

VI. ZOOLOGY.—The principal facts of Structure and Development in the groups named in the list following: Primates—Insectivora—Rodentia—Carnivora (including Pinnipedia)—Cetacea—Perissodactyla—Artiodactyla—Edentata—Marsupialia — Monotremata; Ratitæ—Carinatæ; Crocodilia — Lacertilia—Ophidia — Chelonia — Ornithoscelida; Anura — Urodela; Dipnoi — Teleostei—Ganoidei—Holocephali (Chimæra)—Selachii; Cyclostomi—Leptocardii (Amphioxus); Appendicularia—Ascidiæ; Cephalopoda dibranchia, tetrabranchia—Polyplacophora (Amphomœa) — Prosobranchia (Autocochlides) — Heteropoda (Natantia) — Opisthobranchia (Cryptocochlides)—Pulmonata—Lamellibranchia—Polyzoa ectoprocta, entoprocta—Enteropneusta; Nemertini—Planariæ—Trematoda monogenea, digenea — Nematoidea—Gephyrea—Rotifera; Polychæta—Oligochæta; Phyllopoda—Cladocera—Ostracoda — Copepoda Siphonostoma Cirrhipedia — Isopoda — Amphipoda — Stomapoda — Schizopoda — Decapoda; Insecta hexapoda, myriapodo—Peripatidea—Scorpionidea—Galeodea—Araneina—Acarina; Xiphosura—Eurypterina; Echinoidea—Holothuridea—Asteroidea—Crinoidea; Octactiniæ—Hexactiniæ; Hydromedusæ (Craspedota)—Scyphomedusæ (Acraspeda) — Fibrospongiæ—Calcispongiæ; Peritricha—Heterotricha—Hypotricha—Holotricha; Acinetæ—Radiolaria—Heliozoa—Foraminifera (Thalamophora) Amœboidea. Candidates will also be tested practically by description of the whole or parts of skeletons and skulls and by dissection of animals selected from the following lists: *Skeletons and Skulls for Description*: Homo—Catarrhine Monkey (skull only)—Platyrrhine Monkey (skull only)—Erinaceus—Lepus—Ovis—Sus—Canis—Felis tigris (skull only)—Phocæna—Thylacinus (skull only) — Ornithorhynchus — Echidna — Struthio—Gallus—Columba — Alligator — Monitor—Chelone—Rana — Menopoma — Protopterus—Sturio—Chimæra—Galeus—Salmo. *Invertebrate Skeletons*: Chiton—Haliotis—Buccinum—Spirula — Nautilus—Scorpio — Limulus — Echinus—Spatangus—Galerites—Flustra—Sertularia—Campanularia—Millepora — Stylaster — Tubipora—Gorgonia—Fungia—Dendrophyllia. *Animals for Dissection*: Lepus—Columba — Testudo — Rana — Raia — Perca — Amphioxus — Ascidia—Sepia—Aplysia—Paludina — Limax — Helix — Haliotis — Patella — Anodon — Mya—Astacus—Palæmon—Cancer—Apus (appendages only); Lepas (appendages only)—Oniscus—Gammarus (appendages only)—Scorpio (appendages only)—Julus (appendages only) — Scolopendra (appendages only) — Blatta — Apis (appendages only)—Musca—Nereis—Aphrodite—Tubifex—Lumbricus—Sipunculus—Hirudo—Nemertean—Uraster—Aurelia—Craspedote Medusa—Cordylophora—Alcyonium (appendages only). *N.B.*—In both the Pass and the Honours examination in this subject, about one-third of the questions set in the

written work will relate to the microscopic structure of the tissues of the various classes of animals, and the derivation of their constituent cells from the cell-layers of the embryo. In the practical work the same proportion will be assigned to questions involving an exhibition on the part of the candidate of a competent knowledge of the methods of investigating the minute structure and the development of the tissues of animals of all classes.

VII. ANIMAL PHYSIOLOGY.—Chemical Composition of Food—the quantities and kinds of Food required to balance the losses of the economy; the several processes to which the Food is subjected in Digestion; absorption in general—chyliferous and lymphatic Absorption; the Blood, its organic and chemical constitution—phenomena and mechanism of Circulation; Respiration, its mechanical and chemical actions—effects of its suppression; Temperature of the Body—production and regulation of Animal Heat; Secretion and Excretion—construction and operation of Secreting Apparatus—Chemical composition and amount of the Urinary, Cutaneous, and Pulmonary excretions; Muscular and other Contractile substance—phenomena presented by acting Contractile substance; Nutrition, Growth, and Reparation; The Mechanism of Locomotion, Voice, and Speech; Constitution and Functions of Nervous System—Distinction of Motor and Sensory Nerves or Nerve-fibres—Phenomena presented by Nerves in action—Influence on Contractile Tissue; Functions of Brain, Spinal Cord, and Ganglia—Sensation, Voluntary motion, Reflex Action—Inhibitory Action—Influence of Nervous System on Heart and Blood-vessels, and on Secreting organs; Organs of the Senses and their functions; Reproductive Organs and their functions; Changes produced in the Ovum by impregnation—Outline of the Development of the Embryo and its Envelopes—Nutrition of the Fœtus—Changes which occur at Birth in the Fœtus and in the Parent—Lactation; Changes which take place with Age in the Proportions of the Body—in the Skeleton—in the Dentition—and in the Reproductive apparatus; Differences between Man and Woman other than in the Reproductive Organs; Senile Decay; Somatic and Molecular Death.

Practical Examination.—Each candidate must be prepared: (1) To examine and describe microscopical specimens of animal tissues and organs; (2) To make microscopical preparations of animal tissues and organs; (3) To prove his practical acquaintance with the chemistry of albumen and its allies, milk, the digestive juices and their actions, blood, urine, and glycogen. Also to show his practical acquaintance with the most important apparatus used in studying the physiology of muscle, nerve, the circulatory and respiratory systems, and the organs of sense.

VIII. PHYSICAL GEOGRAPHY AND GEOLOGY.—The general Distribution of Land and Water on the Surface of the Globe; the composition of Sea-water; the boundaries, communications, depth, and general form of the floor of the Arctic, Pacific, and Atlantic Basins; the chief Ocean Currents; Marine Denudation—the formation of Cliffs and Beaches; of Shingle, Sand, and Mud—Transport and Deposit of the products of Denudation by the Sea; the formation of Mineral

Deposits by marine organisms; Inland Seas—the peculiarities of the Mediterranean, the Baltic, the Black Sea, the Caspian, and the Dead Sea; Ice-floes and Shore-Ice; the commoner materials of which the Crust of the Earth is made up—Clay—Quartz—Sandstone—Limestone—Slate—Gneiss—Granite—Trap; Stratified and Unstratified Rocks—Faults—Dykes—Metamorphism—Cleavage; Average height of Continents—direction and general character of the principal Mountain-chains—Watersheds—River and Lake Basins—Special characteristics of particular River-basins—Area and general character of the North-American Lake-system; the great Plains—Steppes—Tundras—Pampas—Sahara—Peat-bogs; Rainfall—Denudation and transport of Materials effected by Rain and Rivers—River-valleys—Cañons—Deltas—Bars—Lacustrine Deposits—the share taken by fresh-water organisms in the formation of Lacustrine Deposits; Snow and Ice—Glaciers and Icebergs as agents of denudation and transport; the Atmosphere and its Currents—Trade-winds and Monsoons—the air as an agent of transport of organic and inorganic matters; the structure and mode of formation of Volcanos—Volcanic products—Earthquakes—Elevation of land—Raised beaches; the conditions of Climate—causes of differences between the climate of localities equidistant from the Equator; Distribution of Terrestrial Plants and Animals—Botanical and Zoological Provinces—Distinctive characters of Flora and Fauna of different regions; General Distribution of Marine Plants and Animals; Fauna and Flora of the Deep Sea; the Nature of the processes by which the remains of Animals and Plants are preserved and fossilised; the general features of the Quaternary epoch: River-gravels—Drift—Boulder-clay—Characteristic Fossils; the general features of the Tertiary epoch—the relations of the Miocene Fauna and Flora with those of earlier and later epochs; the Nummulitic formation—its extent, and the probable physical conditions under which it was produced; the Cretaceous epoch—Extent of the Chalk formation—the physical conditions under which it was produced; the relations of the Cretaceous Fauna and Flora with those of earlier and later epochs; the Wealden and Purbeck formations; the conditions under which they were deposited, and their most characteristic organic remains; General Nature of the Oolitic and Liassic formations—Age of Reptiles—Distinctive features of Mammalian remains of Stonesfield slates—Invertebrata characteristic of Mesozoic epoch; Rhætic and Triassic formations—conditions of deposition—Distinctive organic remains—Salt-beds; Permian formation—Its extent and relations—Palæozoic character of its Invertebrate Fauna — Characteristic Vertebrata; Carboniferous formation — conditions of deposition — formation of Coal—characteristic Fauna and Flora; Devonian formation and the Old Red Sandstone—conditions of deposition—characteristic Fishes; General characters of the Silurian, Cambrian, and Laurentian formations; the earliest known forms of Life, and the Invertebrata characteristic of the Palæozoic epoch; Mineral veins—the ordinary modes of occurrence of Lead, Tin, Iron, Copper, Silver, and Gold.

Practical Examination.—Candidates will be expected to identify and describe

specimens of the principal rocks, and of the fossils characteristic of the formations above enumerated. They will also be expected to draw geological maps and sections, and to explain the meaning and application of models.

IX. MENTAL AND MORAL SCIENCE.*—*Psychology.*—The Senses; the Intellect; the Emotions; the Will.

Logic.—Names, Notions, and Propositions; Syllogism; Induction and subsidiary operations.

Ethics.—Theory of Moral Obligation; Ethical Systems.

On the Saturday morning following the examination, at nine o'clock, the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. A certificate, under the seal of the University and signed by the Chancellor, is delivered at the Public Presentation for Degrees to each candidate who has passed.

Examination for Honours.—Any candidate who has passed the Second B.Sc. examination, and has not previously passed the Second B.A. examination, may be examined at the Honours examination next following the Second B.Sc. examination at which he has passed, for Honours in (1) Mathematics, (2) Mental and Moral Science, (3) Experimental Physics, (4) Chemistry, (5) Botany, (6) Zoology, (7) Physiology, (8) Physical Geography and Geology; provided that he shall have gone through the Pass examination in the corresponding subject or subjects immediately before. And any Bachelor of Arts who has passed the Second B.Sc. examination may, under the same conditions, be examined for Honours in one or more of the above-mentioned subjects; unless he have previously obtained a scholarship at the Second B.A. examination in either of the first two of those subjects, in which case he shall not be admissible to the examination for Honours in that subject.

Doctor of Science (*D.Sc.*).

The examination for the degree of Doctor of Science takes place annually within the first twenty-one days of June, and the examination in each branch occupies four days. No candidate is admitted to the examination for the degree of D.Sc. until after the expiration of two academical years from the time of his obtaining the degree of B.Sc. in this University; unless he shall have passed the Second B.Sc. examination in the First Division at least two academical years subsequently to having passed the First B.Sc. examination, in which case he shall be admitted to the examination for the degree of Doctor

*The Questions in Mental and Moral Science will have no special reference to the writings of any one author or school of authors. In matters of opinion answers will be judged according to their accuracy of thought and expression.

of Science at the expiration of one academical year from the time of obtaining his B.Sc. degree. Candidates for the degree of D.Sc. in any year must give notice of their intention to the Registrar, and pay to him a fee of £10, on or before the 1st of April. Every candidate for the degree of D.Sc. must be examined in some one or more of the following branches of knowledge, to be selected by himself; and no candidate will be approved by the examiners unless he have shown a thorough practical knowledge of the principal subject,* and a general acquaintance with the subsidiary subject or subjects, specified as belonging to the branch so selected.

Any candidate for the degree of Doctor of Science may transmit to the Registrar, not later than February 1st, a printed dissertation, thesis, memoir, or other work (whether written in view of his candidature, or previously published, or already accepted by one of the Learned Societies), treating scientifically a subject or part of a subject comprised within any one of these Sixteen Branches of Science, and embodying the results of his investigation, or showing evidence of his own work, whether based on the discovery of new facts observed by himself, or of new relations of facts observed by others.

The examiners, having duly satisfied themselves as to the authenticity and genuineness of such work, *and having examined the candidate thereupon*, shall allow to it such proportionate value in reference to the whole examination as they think fit, and may accept it in lieu of all or so much as they think fit of the written or practical examination in the subject therein dealt with and in any other subjects of the same branch, a knowledge of which is, in the opinion of the examiners, virtually involved in the knowledge of the subject of the work.

Candidates who have submitted a dissertation, thesis, memoir, or other work, in accordance with the foregoing regulation, must, so far as required, attend on the days fixed for the examination in the branch chosen, and will be expected to be able to pass any test (whether theoretical or practical) which may be deemed necessary in order to estimate the value of the work, and to prove their acquaintance with the branch of science which they have selected as a subject of examination.

PHYSICAL SCIENCE.—BRANCH I. *Pure Mathematics.—Principal Subject*: Any one of the six subjects mentioned in the subjoined list:—1. Modern Algebra; 2. Modern Geometry; 3. Theory of Numbers; 4. Calculus of Probability, and Definite Integrals; 5. Elliptic Functions; 6. Theory of the Integrals of Algebraic Functions. N.B. The candidate shall have the option of including the Theory of Equations and of Substitutions under Subject 1, and the Calculus of Quaternions under Subject 2. *Subsidiary Subject*: Any one of the five remaining subjects in the above list.

* The Senate desire to make it understood that the candidate for the degree of D.Sc. will be expected to be so fully conversant with the principal subject he may select, as to be able to go through any examinational test (whether theoretical or practical) of his acquirements in it that can be fairly applied.

BRANCH II. *Mechanical Science.—Principal Subject*: Statics; Hydrostatics; Dynamics; Hydrodynamics and Hydraulics; Pneumatics. These subjects are to be treated both mathematically and experimentally, and with special reference to engineering works, and the construction and working of machinery by water, steam, or any other power. Practical Mechanics, comprising drawings and descriptions of machines, and of mechanical contrivances employed in them. *Subsidiary Subjects*: Heat, in its relations to mechanical science; Geology, in its relations to engineering works; Succession of Geological Formations in the British Isles.

BRANCH III. *Astronomy.—Principal Subject*: 1. Plane Astronomy, to be treated generally, as well as with special reference to the business of the Observatory, Geodesic Surveys, and Nautical Astronomy. 2. Physical Astronomy, comprising a general knowledge of the Lunar and Planetary Theories, and the Figure of the Earth. *Subsidiary Subject*: Common Optics; a knowledge of the Construction of Optical and Astronomical Instruments, with an acquaintance with the Mathematical Propositions relating thereto.

BRANCH IV. *Inorganic Chemistry.—Principal Subject*: Inorganic Chemistry. *Subsidiary Subjects*: Either Organic Chemistry; or Mineralogy, Crystallography, and Chemical Technology in its relations to Inorganic Chemistry.

BRANCH V. *Organic Chemistry.—Principal Subject*: Organic Chemistry. *Subsidiary Subjects*: Either Inorganic Chemistry; or Chemical Technology in its relations to Organic Chemistry, and the Chemistry of Animal and Vegetable Life.

BRANCH VI. *Electricity.—Principal Subject*: Static Electricity; Dynamic Electricity. *Subsidiary Subjects*: Electro-Chemistry; Heat; Magnetism.

BRANCH VII. *Magnetism.—Principal Subject*: Electro-Magnetism; Magneto-Electricity; Diamagnetism. *Subsidiary Subjects*: Dynamic Electricity; Sensible Heat.

BRANCH VIII. *Physical Optics; Heat; Acoustics.—Principal Subject*: Either Physical Optics and Heat; or Physical Optics and Acoustics. *Subsidiary Subject*: Either Heat, or Acoustics; according as the former or the latter is excluded from the principal subject. N.B. The subjects comprised under Branches VI., VII., VIII. may be treated either experimentally or mathematically, or both experimentally and mathematically, according to the choice of the candidate.

BIOLOGICAL SCIENCE.—BRANCH IX. *Animal Physiology.—Principal Subject*: Animal Physiology (including Histology and Development). *Subsidiary Subjects*: Comparative Anatomy; Vegetable Physiology; Physiological Chemistry.

BRANCH X. *Comparative Anatomy.—Principal Subject*: The Typical Structure, and the chief deviations from it, of every Class in the Animal Kingdom; together with a special acquaintance with the Anatomy of some particular Class, to be selected by the candidate and approved by the

examiner. *Subsidiary Subject*: Animal Physiology (including Histology and Development).

BRANCH XI. *Zoology.—Principal Subject*: The Structural and Physiological characters of all the Classes and Orders of the Animal Kingdom; together with a critical knowledge of the Genera and Species of some particular Family, to be selected by the candidate and approved by the examiner. *Subsidiary Subjects*: Comparative Anatomy; Animal Physiology in its relations to Classification and Geographical Distribution.

BRANCH XII. *Vegetable Physiology. — Principal Subject*: Vegetable Physiology (including Histology and Development). *Subsidiary Subjects*: Vegetable Morphology; Animal Physiology; Physiological Chemistry.

BRANCH XIII.—*Systematic Botany.—Principal Subject*: The Structural and Physiological characters of the Natural Orders of the Vegetable Kingdom; together with a critical knowledge of the Genera and Species of some particular group, to be selected by the candidate and approved by the examiner. *Subsidiary Subjects*: Vegetable Morphology; Vegetable Physiology in its relations to Classification and Geographical Distribution.

GEOLOGICAL AND PALÆONTOLOGICAL SCIENCE.—BRANCH XIV.—*Geology. —Principal Subject*: Descriptive and Physical Geology, with Physical Geography. *Subsidiary Subjects*: Palæontology: A general acquaintance with the Characters and Distribution of Organic Remains; Mineralogy—such portions as bear more immediately on Geological questions; Chemistry—as related to Geological questions.

BRANCH XV.—*Palæontology.—Principal Subject*: The characters of the Classes of extinct Animals, and the Orders of extinct Plants; together with a critical knowledge of the Genera and Species of some particular group, to be selected by the candidate and approved by the examiner: Stratigraphical distribution of extinct Animals and Plants. *Subsidiary Subjects*: Descriptive Geology, Comparative Anatomy, Botany, Animal and Vegetable Physiology.

MENTAL AND MORAL SCIENCE.—BRANCH XVI.—*Psychology, Logic, Ethics. —Principal Subject*: Psychology—The Senses, the Intellect, the Emotions, the Will; Logic—Names, Notions, and Propositions—Syllogisms—Induction and Subsidiary Operations; Ethics—Theory of Moral Obligation—Ethical Systems. *Subsidiary Subjects*: Physiology of the Nervous System and Organs of the Senses in Man and other Animals; History of Philosophy; Political Philosophy; Political Economy.

In the course of the following week the examiners publish a list of the candidates who have passed, arranged in alphabetical order. A certificate, under the seal of the University and signed by the Chancellor, is delivered at the Public Presentation for Degrees to each candidate who has passed.

Note.—By the term "academical year" is ordinarily meant the period intervening between any examination and an examination of a higher grade in the

following year, which period may be either more or less than a calendar year. Thus the interval between the First examinations in Arts, Science, and Medicine and the Second examinations of the next year in those faculties respectively, is about sixteen months; whilst the interval between the Second B.A. examination and the M.A. examination of the next year, or between the Second B.Sc. examination and the D.Sc. examination of the next year, is less than eight months. Nevertheless, each of these intervals is counted as an "academical year."

Provincial Examinations.—Examinations are appointed by the Senate from time to time, upon the application of any city, institution, or college desiring to be named as a local centre for one or more examinations, upon the same conditions as the Matriculation examination in the like case. As the list of provincial centres is often not complete until about six weeks before the examination, candidates wishing for full information in respect thereof should not apply earlier.

*Bachelor of Laws (LL.B.).**

Candidates for the degree of Bachelor of Laws are required to pass two subsequent examinations.

First LL.B. Examination.—The First LL.B. examination takes place once in each year, within the first fourteen days of January. No candidate is admitted to this examination within twelve months from the time of his passing the Matriculation examination, unless he have taken a degree in Arts in either the University of Sydney or in that of Melbourne, in which case he may at once proceed to the First LL.B. examination. No candidate shall be admitted unless he have produced a satisfactory certificate of good conduct, which shall be transmitted to the Registrar at least one calendar month before the commencement of the examination. The fee for this examination is £5. No candidate is admitted to the examination unless he have previously paid this fee to the Registrar.

The examination is conducted by means of printed papers; but the examiners are not precluded from putting, for the purpose of ascertaining the competence of the candidates to pass, *viva voce* questions to any candidate in the subjects in which they are appointed to examine.

The examination is in the following subjects:

1. *Jurisprudence*: Austin's Lectures on General Jurisprudence (3rd or some subsequent complete edition), with Tables, Notes, and Fragments. 2. *Roman Law*: Institutes of Justinian; with Ortolan's Commentary and the two parts† of the Introduction (in French; the 7th or some subsequent edition). Institutes

* Bachelors of Laws of the University of London, who enter upon articles of clerkship to an attorney after graduation, are admissible as attorneys after three (instead of five) years' service.

† *Histoire de la Législation Romaine*, and *Généralization du Droit Romain*.

of Gaius. Maine's Ancient Law. The papers in Roman Law include passages in Latin, which the candidate is required to translate: of these passages at least one is from the Digests. No candidate shall be allowed to pass who does not show a competent knowledge of Latin. 3. *Constitutional History of England.*

Candidates are not approved by the examiners unless they have shown a competent knowledge in all the subjects of examination.

On Wednesday morning, at nine o'clock, in the week following that in which the examination terminates, the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order; and a Pass certificate, signed by the Registrar, is delivered to each candidate who may apply for it.

Examination for Honours.—Any candidate who has passed the First LL.B. examination may be examined at the Honours examination next following the First LL.B. examination at which he has passed, for Honours in Jurisprudence and Roman Law. This examination takes place on Thursday and Friday in the week following the Pass examination, in the morning from ten to one, and in the afternoon from three to six. The examination is conducted entirely by means of printed papers. In the course of the following week the examiners publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes according to their respective degrees of proficiency. If, in the opinion of the examiners, any candidate possess sufficient merit, the candidate who distinguishes himself the most receives an exhibition of £40 per annum for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the Second LL.B. examination within three academical years from the time of his passing the First LL.B. examination.

Second LL.B. Examination.—The Second LL.B. examination takes place once in each year, within the first fourteen days of January. No candidate who has not already graduated in one of the other Faculties of this University can be admitted to this examination within two academical years of the time of his passing the First LL.B. examination; but a graduate in Arts, Science, or Medicine is admissible at the expiration of one year after so passing. No candidate is admitted unless he have produced a satisfactory certificate of good conduct, which shall be transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, to be previously paid to the Registrar. The examination is conducted by means of printed papers; but the examiners are not precluded from putting *vivâ voce* questions.

The *examination* is in the following subjects: 1. Common Law; 2. Equity; 3. Real Property Law; 4. Roman Law—a portion of the Digest (to be announced two years previously); History of Roman Law to the time of Justinian.

Candidates are not approved unless they have shown a competent knowledge in all the subjects. On Wednesday morning in the week following the examination, the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. A certificate is delivered at the Public Presentation for Degrees.

Examination for Honours.—Any candidate who has passed the Second LL.B. examination may be examined at the Honours examination next following the Second LL.B. examination at which he has passed, for Honours in Common Law (including Law of Evidence and Criminal Law) and Equity. This examination takes place on Thursday and Friday in the week following the Pass examination, in the morning from ten to one, and in the afternoon from three to six. The examination is conducted entirely by means of printed papers. In the course of the following week the examiners publish a class list. If, in the opinion of the examiners, any candidate possess sufficient merit, the candidate who distinguishes himself the most receives a scholarship of £50 per annum for two years, with the style of University Law Scholar.

Doctor of Laws (*LL.D.*).

The examination for the degree of Doctor of Laws takes place annually in the week following the LL.B. Pass examinations. No candidate is admitted to this examination unless he has passed the Second examination for the degree of LL.B. in this University; and no candidate under the age of thirty is admitted to this examination until after the expiration of two academical years from the time of his obtaining the degree of LL.B. Candidates are required to give notice of their intention to the Registrar before the 15th of the previous December. The *fee* for the degree of Doctor of Laws is £10, to be paid to the Registrar previous to the examination. If, after payment, a candidate withdraws his name, or fails to present himself, or fails to pass, the fee is not returned; but he is allowed to enter for any one subsequent LL.D. examination without the payment of additional fee, provided that he give notice to the Registrar before the 15th of the previous December; such notice, in respect to the privilege aforesaid, being considered equivalent to entry.

The examination is in the following subjects*: 1. Roman Law. 2.

* Candidates, when giving notice, must specify the optional subjects they select.

One of the three following subjects, at the option of the candidate: Common Law, including Law of Evidence and Criminal Law; Real Property Law, including Conveyancing; Equity. 3. One of the two following subjects, at the option of the candidate: International Law, Public and Private; Jurisprudence and Principles of Legislation. Candidates will not be approved by the examiners unless they show a competent knowledge in all the subjects. In the course of the following week the examiners publish an alphabetical list of the candidates who have passed. If in the opinion of the examiners sufficient merit be evinced, the candidate who distinguishes himself the most at the examination for the Degree of Doctor of Laws receives a Gold Medal of the value of £20. A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

*Bachelor of Arts (B.A.).**

Candidates for the degree of Bachelor of Arts are required to pass two examinations.† Nevertheless, Bachelors of Science of this University may be admitted to the degree of Bachelor of Arts after passing at the two B.A. examinations‡ in those subjects in which they have not been previously examined.§

First B.A. Examination.—The First B.A. examination takes place once in each year, commencing on the third Monday in July. No candidate (with the exception of such as have obtained Honours at the Matriculation examination in the preceding January) can be admitted to this examination within one academical year of the time of his passing the Matriculation examination; nor without having produced a satisfactory certificate of good conduct, which must be transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, to be previously paid to the Registrar.‖ The examination is conducted by

* The Pass examinations may be held not only at the University of London, but also, under special arrangement, in other parts of the United Kingdom, or in the Colonies. The Honours examinations are held in London only.

† Bachelors of Arts of the University of London who enter upon articles of clerkship to a solicitor after graduation are admissible as solicitors after three (instead of five) years' service. Bachelors of Arts of the University of London are admissible to examination for the Theological Certificate of King's College, after one year's attendance in the Theological Department subsequent to graduation; two years of such attendance being required from non-graduates.

‡ Bachelors of Science are allowed to present themselves at both these examinations in the same year; and are exempted from payment of the fee at the Second B.A. examination.

§ Thus, at the First B.A. examination, Bachelors of Science are exempted from examination in Mathematics; while at the Second B.A. examination, any Bachelor of Science who has passed the Second B.Sc. examination in either Pure Mathematics, Mixed Mathematics, or Experimental Physics, is exempted from examination in Branch IV., and any Bachelor of Science who has passed the Second B.Sc. examination in Mental and Moral Science is exempted from examination in Branch V. The foregoing exemptions refer to the Pass examinations alone; candidates who proceed to the Honours examinations must conform to the regulations relating specially to them.

‖ The fee must be paid when the candidate inscribes his name on the Register of the University, and should not be sent in advance. Information respecting the time for registration is sent to each candidate with the acknowledgement of his certificate or notice.

means of printed papers, but the examiners may put *vivâ-voce* questions.

The examination is in the following subjects:

MATHEMATICS.—*Arithmetic.*—The ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; the Rule of Three and its applications; Simple and Compound Interest; Present Value, Discount, and Annuities; Extraction of the Square Root; Nature and Use of Logarithms.

Algebra.—The ordinary Rules of Algebra; Reduction and Manipulation of Algebraical Fractions; Ratio, Proportion, and Variation; Permutations and Combinations; Arithmetical and Geometrical Progressions; Simple and Quadratic Equations; Determination of Common Factors.

Geometry.—The Relations and Properties of Similar Rectilinear Figures; The Elementary Properties of the Plane, including those of the Angles made by Planes with Right Lines and with each other; the Elementary Properties of the Sphere, including those of the Great and Small Circles on the Surfaces of the Spheres; the Mensuration of the Simpler Plane and Solid Figures, including that of the Circle, the Sphere, the Cylinder, and the Cone; Elements of Co-ordinate Geometry, in Rectangular and Polar Co-ordinates, as far as the Equations and Properties of the Right Line and Circle.

Trigonometry.—The different Measurements of Angles, and the ordinary Relations of their Trigonometrical Ratios; the Elementary Formulæ connecting the Trigonometrical Ratios of two or more Angles; the solution of the several cases of Plane Triangles, including the determination of their Areas; the determination of the Heights and Distances of Inaccessible Objects.

CLASSICS.—*The Latin Language.*—Two Latin subjects, one in prose, the other in verse, to be selected two years previously by the Senate from the works of the undermentioned authors: Virgil, the Eclogues, or two books of the Georgics, or two books of the Æneid; Horace, the Odes, or the Satires, or the Epistles; Cicero, one of the Orations, or one book from any of the philosophical or rhetorical Works; Livy, one book; Tacitus, one book of either the Annals or the Histories.

History.—History of Rome to the Death of Augustus. The papers in Latin and Roman History shall contain passages of the specified authors, with simple passages of Latin from books not previously named, to be translated into English; short passages of English to be translated into Latin; and questions in Grammar, History, and Geography.

Greek.—One book, either of Homer or of Xenophon, to be selected two years previously by the Senate, together with easy questions in Grammar.

THE ENGLISH LANGUAGE, LITERATURE, AND HISTORY.—Writing out the substance of a paragraph previously read by the examiner; the Grammatical Structure of the Language; Composition. Other special subjects to be defined two years previously. *Note*: The examination in History will be confined to a limited period to be prescribed in each year as one of the special

subjects; such period, as a rule, coinciding with the defined period of English Literature.

THE FRENCH OR THE GERMAN LANGUAGE.—Translation into English, with questions in Grammar.

Candidates are not approved by the examiners unless they show a competent knowledge in: (1) Latin, and Roman History; (2) Greek; (3) English Language, Literature, and History; (4) Mathematics; (5) Either the French or the German Language.*

On Saturday morning at nine o'clock in the following week the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. And a Pass certificate is delivered to each candidate who may apply for it, after the report of the examiners has been approved by the Senate.†

Examination for Honours.—Any candidate who has passed the First B.A. examination in all its subjects, may be examined at the Honours examination next following the First B.A. examination at which he has passed, for Honours in (1) Mathematics, (2) Latin, (3) English, (4) French, and (5) German; unless he have previously obtained the exhibition in Mathematics at the First B.Sc. examination, in which case he shall not be admissible to the examination for Honours in that subject.

The *examination* for Honours in *Mathematics* is in the following subjects: Algebra; Theory of Equations; Plane Trignometry; Spherical Trigonometry; Pure and Co-ordinate Geometry of Two Dimensions, up to and including the properties of the Conic Sections; Differential Calculus; Integral Calculus; Statics of Material Particles, of Rigid Bodies, of Flexible Cords, and of Elastic Beams; Kinetics of Material Particles; Hydrostatics of Gravitating Fluids. This examination takes place on Monday, Tuesday, and Wednesday in the second week after the Pass examination; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes according to their respective degrees of proficiency.

Candidates for Honours in *Latin* are examined in any of the following subjects:

THE LATIN LANGUAGE.—Plautus—Trinummus, Captivi; Terence—Andria, Hecyra; Lucretius—books iii. and iv.; Virgil; Horace; Juvenal—Satires 1, 5, 7, 14; Persius; Satires 2, 5; Cicero—De Officiis, De Oratore, and the Orations Pro Milone, Pro Cluentio, In Verrem (lib. v., De Supplicüs); Livy—books viii., ix., x.; Tacitus—Annals, books i.—vi. inclusive.

* Candidates can obtain credit for only *one* of these languages.

† The report cannot, usually, be laid before the Senate until towards the end of October.

COMPOSITION IN LATIN AND ENGLISH.—Latin Prose—Translation and Retranslation; Analysis of any of the subjects selected for examination; Original Composition upon questions arising out of the Classical Authors selected for examination. The Papers in Latin shall contain passages of the ancient Authors to be translated into English, and passages of English to be translated into Latin. The Papers shall also contain questions in Grammar, History, and Geography.

This examination takes place on Monday, Tuesday, and Wednesday in the week following the examination for Honours in Mathematics; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes according to their respective degrees of proficiency.

Candidates for Honours in *English* are examined in subjects to be defined two years previously, and in Original Composition upon questions arising out of the authors selected for examination.* This examination takes place on Thursday and Friday in the same week with the examination for Honours in Mathematics; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes according to their respective degrees of proficiency.

The examinations for Honours in the *French* and in the *German* Languages take place in the same week with the examination for Honours in Latin; that in French on Thursday, in the morning from ten to one, and in the afternoon from three to six; that in German on Friday, in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners in each of these languages publish a list of the candidates who acquit themselves to their satisfaction, arranged in three classes.

If in the opinion of the examiners any candidate of not more than twenty-two years of age at the commencement of the Pass examination, who has passed either the First B.A. examination or the First B.Sc. examination, possess sufficient merit, the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-two years of age at the commencement of the Pass examination, in *Mathematics*, receives an exhibition of £40 per

* The English Honours subjects for 1883 were—History of England from 1685 to 1714; History of English Literature during the same period; Pope: The Rape of the Lock; Swift: The Battle of the Books; Addison: Papers on Imagination in the Spectator (Nos. 411 to 421 inclusive); Morris and Skeat: Specimens of Early English, Part II., A.D. 1298—A.D. 1393; Introduction, and Sections i.—xii., both included (Clarendon Press Series).

annum for the next two years, payable in quarterly instalments (it being intended that one exhibition only be given among all the candidates, although some of such candidates may have passed the First B.A. examination and others the First B.Sc. examination); provided that on receiving each instalment he declare his intention of presenting himself at the Second examination within two academical years from the time of his passing the First examination for the same degree, whether B.A. or B.Sc. as the case may be.

If in the opinion of the examiners any candidate of not more than twenty-two years of age at the commencement of the Pass examination, who has passed the First B.A. examination, possess sufficient merit, the candidate who distinguishes himself the most of those who were not more than twenty-two years of age at the commencement of the Pass examination, in *Latin*, receives an exhibition of £40 per annum for the next two years, payable in quarterly instalments; provided that on receiving each instalment he declare his intention of presenting himself at the Second B.A. examination within two academical years from the time of passing the First B.A. examination.

Under the same circumstances, the candidate who distinguishes himself the most of those who were not more than twenty-two years of age at the commencement of the Pass examination, in *English*, receives an exhibition of £30 per annum for the next two years, payable in quarterly instalments; provided that on receiving each instalment he declare his intention of presenting himself at the Second B.A. examination within two academical years from the time of passing the First B.A. examination.

Under the same circumstances, the candidate who distinguishes himself the most of those who were not more than twenty-two years of age at the commencement of the Pass examination, in *French*, and the candidate who distinguishes himself the most of those who were not more than twenty-two years of age at the commencement of the Pass examination, in *German*, each receives a prize to the value of £10 in books or money.

Second B.A. Examination.—The Second B.A. examination takes place once in each year, commencing on the fourth Monday in October. No candidate is admitted to this examination within one academical year of the time of his passing the First B.A. examination, unless he has previously taken the degree of B.Sc. He must produce a satisfactory certificate of good conduct, which must be transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, to be paid to the

Registrar previously.* The examination is conducted by means of printed papers; but the examiners may put *viva voce* questions.

The *examination* is in the following branches of knowledge; Branches I., II., and III. being compulsory, but an option being allowed between Branch IV. and Branch V.†: I. Latin, with Roman History; II. Greek, with Grecian History; III. *One* of the following Languages: English, French, German, Italian, Arabic, Sanskrit; IV. Either *Pure* Mathematics, or *Mixed* Mathematics;‡ V. Mental and Moral Science.‡

I. LATIN.—The Latin Language; with Grammar, History, and Geography, as follows: (*a*) Two subjects, one in prose, the other in verse, to be selected two years previously by the Senate from the works of the following authors: Cicero—One of the Orations, or one book from any of the Philosophical or Rhetorical works, or one book from the Letters; Livy—One book; Tacitus—One book of either the Annals or the Histories; Virgil—The Eclogues and two books of the Georgics, or the Georgics, or four books of the Æneid; Horace—The Odes, with one book of the Satires or Epistles; Terence—One Play; Ovid—Fasti, two books; Juvenal—Two (or three) Satires. (*b*) Questions in Grammar, with passages for translation into English from books not previously named, and passages of English to be translated into Latin. *Note*: Special stress is laid on this part of the examination. (*c*) Outlines of Roman History to the death of Domitian, with a special knowledge of some limited period of political and literary history to be announced two years previously, and Geography.

II. GREEK.—The Greek Language; with Grammar, History, and Geography, as follows: (*a*) Two Subjects, one in prose the other in verse, to be selected two years previously by the Senate from the works of the following authors: Herodotus—One book; Thucydides—One book; Xenophon—Two books from any of his larger works, or the Œconomics, or the Hiero and the Agesilaus. Demosthenes—One of the longer or three of the shorter Public Orations, or two of the Private Orations; Isocrates—One Oration; Plato—Apology of Socrates, and Crito, or one of the longer and two of the shorter Dialogues; Homer—Six Books; Æschylus, Sophocles, Euripides, Aristophanes—One or two plays to be selected from the works of these dramatists. (*b*) Questions in Grammar and Passages for Translation into English from books not previously named. *Note*: Special stress is laid on this part of the examination. (*c*) Outlines of Greek History to the Death of Alexander, with a special knowledge of some limited period of political and literary history to be announced two years previously, and Geography.

III. ENGLISH, FRENCH, GERMAN, ITALIAN, ARABIC, SANSKRIT.—*The English*

* The Fee must be paid when the candidate inscribes his name on the Register of the University, and should not be sent in advance. Information respecting the time for registration will be sent to each candidate with the acknowledgment of his certificate or notice.

† Candidates, on sending in their names, must mention the optional subjects they select. If Italian, Arabic, or Sanskrit be selected, *two calendar months'* notice must be given.

‡ Candidates are not allowed to offer themselves for examination in both Branch IV. and Branch V.

Language and Literature.—History, Structure, and development of the English Language; the Elements of Anglo-Saxon Grammar; other special subjects to be defined from time to time.

The French, the German, or the Italian Language.—Translation, Retranslation, and Grammar.

The Arabic or the Sanskrit Language.—Translation from Arabic or Sanskrit into English, with questions in Grammar.

IV. MATHEMATICS.*—(*a*) *Pure Mathematics.*—The subjects prescribed for the First B.A. Pass examination with the addition of the following:

Algebra.—Theory of Indices, Radicals, and Surds; Theory of Imaginary Quantities; Binomial Theorem and its Applications; Theory of Logarithms and Exponentials.

Trigonometry.—De Moivre's Theorem, and its Applications; Ordinary Formulæ connecting the sides and Angles of Spherical Triangles; Solution of the several cases of Spherical Triangles, including the determination of their Areas.

Geometry.—Theory of Harmonic Section and its Applications; Central and Focal Properties of Conics, by Pure and by Coordinate Geometry; Theory of Poles and Polars with respect to Conics.

(*b*) MIXED MATHEMATICS.—*Dynamics.*—Composition, Resolution, and Equilibrium of Forces acting at a Point; Composition, Resolution, and Equilibrium of Forces acting in a Plane; Composition, Resolution, and Equilibrium of Forces acting in Parallel lines; Centres of Gravity of Rigid Bodies; the Mechanical Powers; Nature, Intensity, and Transmission of Pressure in Liquids; Pressure of Liquids in Equilibrium under the action of Gravity; Equilibrium of Solids floating or immersed in Gravitating Liquids; Specific Gravities of Substances, Solid, and Liquid; Measures of Velocity, Acceleration, and Force; Acceleration of Masses under the action of Forces; the Laws of Rectilinear Motion; Rectilinear Motion of Particles under the action of Gravity; Composition and Resolution of Velocities and Accelerations; Free motion of Projectiles under the action of Gravity; Circular Motion of Particles, Harmonic Vibrations, and Centrifugal Force; Vibrations of Simple Pendulums in small Circular Arcs; Theory of Dynamical Work, Energy of Position, and Energy of Motion.

Astronomy.—Points, Lines, Planes, and Circles of the Celestial Sphere; Phenomena depending on the Earth's Rotation round its axis; Phenomena depending on the Earth's Revolution round the Sun; Phenomena depending on Change of Place on the Surface of the Earth; Determination of Time and Place on the Surface of the Earth; Determination of the Magnitude and of the Figure of the Earth; Determination of the Distances of the Moon, Sun, and Planets; Kepler's Laws of Planetary Motion, and their consequences; Refraction and Aberration, as affecting Astronomical Obervation.

* Candidates choosing Mathematics can obtain credit for only *one* of the two divisions of the subject.

V. MENTAL AND MORAL SCIENCE.*—*Psychology.*—The Senses—the Intellect—the Emotions—the Will.

Logic.—Names, Notions, and Propositions—Syllogism—Induction and Subsidiary operations.

Ethics.—Theory of Moral Obligation—Ethical Systems.

On the morning of the Saturday following the examination the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order.

A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

Examination for Honours.—Any candidate who has passed the Second B.A. examination, and has not previously passed the Second B.Sc. examination, may be examined at the Honours examination next following the Second B.A. examination at which he has passed, for Honours in (1) Mathematics, (2) Classics, (3) Mental and Moral Science, (4) French, and (5) German. And any Bachelor of Science who has passed the Second B.A. examination may be examined for Honours in one or more of the above-mentioned subjects, *provided that he have gone through the Pass examination in the corresponding subject or subjects immediately before;* unless he have previously obtained a scholarship at the Second B.Sc. examination in either of the subjects which are common to it with the Second B.A. examination, in which case he is not admissible to the examination for Honours in that subject.

Candidates for Honours in Mathematics are examined in the Honour subjects of the First B.A. examination carried to a higher development; and also in the following: Higher Co-ordinate Geometry of two Dimensions; Co-ordinate Geometry of three Dimensions; Differential Equations; Dynamics of Rigid Bodies, and of Systems of Bodies; Vibrations of Flexible Cords; General Equations of the Equilibrium and Motion of Fluids; Propagation of Sound by Plane and Spherical Waves; Geometrical Optics; Spherical Astronomy. This examination takes place on Monday, Tuesday, and Wednesday in the second week after the Pass examination; in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates, who acquit themselves to their satisfaction, arranged in three classes, according to their respective degrees of proficiency.

* The questions in Mental and Moral Science will have no special reference to the writings of any one author or school of authors. In matters of opinion answers will be judged according to their accuracy of thought and expression.

Candidates for Honours in Classics are examined in any of the following subjects:

THE GREEK AND LATIN LANGUAGES.—Homer—The First twelve books of the Iliad, and the second six books of the Odyssey; Æschylus—Agamemnon and Eumenides; Sophocles—Œdipus Tyrannus—Electra; Euripides—Ion, Hercules Furens; Aristophanes—Acharnians and Peace. Herodotus—books ii., vii. Thucydides—books i., iii., iv. Demosthenes, Æschines—the orations on the Embassy. Plato—the Republic, books vi., vii., viii. Aristotle, Politics, books i., ii., iii. Latin subjects the same as those for the First B.A. examination for Honours.

COMPOSITION IN GREEK, LATIN, AND ENGLISH.—Greek Prose—Translation, Retranslation; Latin Prose—Translation, Retranslation; Analysis of any of the subjects selected for examination; Original Composition upon questions arising out of the Classical Authors selected for examination. The paper in Classics shall contain passages of the ancient Authors to be translated into English, and passages of English to be translated into Latin and Greek. The papers shall also contain questions in Grammar, History, and Geography.

In the course of the week following the examination the examiners publish a test-class list.

Candidates for Honours in Mental and Moral Science are examined in the following subjects: Names, Notions, and Propositions; Syllogism; Induction and subsidiary operations; the Senses; the Intellect; the Emotions; the Will; the Theory of Ethics.

Candidates for Honours in French or in German are tested as to their power of maintaining a conversation in the language they select; in regard, on the one hand, to their ready comprehension of questions addressed to them by the examiners, and, on the other, to the intelligibility and grammatical correctness of their replies; and no candidate who fails to pass this portion of the examination to the satisfaction of the examiners shall be placed in the First Class.

If in the opinion of the examiners any candidate of not more than twenty-three years of age at the commencement of the Pass examination, who shall have passed either the Second B.A. examination or the Second B.Sc. examination, possess sufficient merit, the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-three years of age at the commencement of the Pass examination, in *Mathematics*, and the candidate who distinguishes himself the most of all the candidates who have passed either of the said examinations, and who were not more than twenty-three years of age at the commencement of the Pass examination, in *Mental and Moral Science*, each receives fifty pounds per annum for the next

three years, with the style of University Scholar; it being intended that one scholarship shall be given in each case among all the candidates, although some of such candidates may have passed the Second B.A. examination and others the Second B.Sc. examination.

If in the opinion of the examiners any candidate of not more than twenty-three years of age at the commencement of the Pass examination, who shall have passed the Second B.A. examination, possess sufficient merit, the candidate who distinguishes himself the most of those who were not more than twenty-three years of age at the commencement of the Pass examination, in *Classics*, receives £50 per annum for the next three years, with the style of University Scholar.

Under the same circumstances, the candidate who distinguishes himself the most of those who were not more than twenty-three years of age at the commencement of the Pass examination, in *French*, and the candidate who distinguishes himself the most of those who were not more than twenty-three years of age at the commencement of the Pass examination, in *German*, each receives a prize to the value of £15 in books or money.

Master of Arts (*M.A.*).

The examination for the degree of Master of Arts takes place once in each year, commencing on the first Monday in June. No candidate is admitted to the examination until after the expiration of one academical year from the time of his obtaining the degree of B.A. in this University; nor is any candidate admitted unless he have given notice to the Registrar at least *fourteen days* before the commencement of the examination, nor unless he have shown evidence of having completed his twentieth year. The *fee* for this examination is £10, to be previously paid to the Registrar. The examination is conducted by means of printed papers; but the examiners may put *viva voce* questions. The examination is in one or more of the following branches of knowledge: I. Classics; II. Mathematics and Natural Philosophy; III. Mental and Moral Science, Political Philosophy, History of Philosophy, Political Economy. No candidate will be approved unless he have shown a competent knowledge in one of these branches.

The examination in *Classics* shall include the following subjects: The Greek and Latin Classic Authors; Prose Composition in Greek, Latin, and English; Ancient History, and the History of Europe to the end of the Eighteenth Century.

The examination in *Mathematics and Natural Philosophy* includes

the Honours subjects of the second B.A. examination, and also the following: Definite Integrals; Finite Differences; Theory of Probability; Physical Astronomy; Sound; Physical Optics.

The examination in Branch III. includes the following subjects:

MENTAL AND MORAL SCIENCE. — Names, Notions, and Propositions; Syllogism; Induction and subsidiary operations; the Senses; the Intellect; the Emotions; the Will; the Ethical Systems.

POLITICAL PHILOSOPHY.—Bentham—"Principles of Morals and Legislation" (Clarendon Press Reprint).

HISTORY OF PHILOSOPHY.—History of Philosophy in the 17th century, with special reference to Locke's "Essay concerning Human Understanding."

POLITICAL ECONOMY.

The examinations in Political Philosophy and History of Philosophy are here set for 1882. They are varied from year to year.

The candidates who pass to the satisfaction of the examiners are arranged in the order of proficiency. A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

If in the opinion of the examiners any candidate evince sufficient merit, the candidate who distinguishes himself the most in Branch I., the candidate who distinguishes himself the most in Branch II., and the candidate who distinguishes himself the most in Branch III., each receives a gold medal of the value of £20; and if the same candidate distinguish himself the most in two or all of the said branches, he receives a gold medal in right of each branch in which he so distinguishes himself.

Under the same circumstances, the candidate who distinguishes himself the most in *Political Economy* receives a prize of books* to the value of £16, provided that he has satisfied the examiners in the other subjects of the M.A. Branch III. examination.

Doctor of Literature (*D.Lit.*).

Candidates for the degree of Doctor of Literature are required to have obtained the degree of B.A. in this University, and to pass two subsequent examinations. Nevertheless, Masters of Arts in this University who have taken their degree in Branch I. are admitted to the degree of Doctor of Literature after passing the second of the two examinations only.

First D.Lit. Examination. — The First D.Lit. examination takes place once in each year, commencing on the first Monday in June. No candidate is admitted until after the expiration of one academical year from the time of his obtaining the degree of B.A. in this University, nor

* This prize (which is to consist of standard works on Political Economy or allied subjects), having been provided by the liberality of Mrs. Gerstenberg, in memory of her husband, the late Isidor Gerstenberg, Esq., will be entitled "the Gerstenberg Memorial Prize."

is any candidate admitted unless he have given notice to the Registrar at least *fourteen days* before the commencement of the examination, nor unless he have shown evidence of having completed his twentieth year. The *fee* for this examination is £10, to be previously paid to the Registrar. The examination is conducted by means of printed papers; but the examiners may put *vivâ voce* questions.

The *examination* is in (1) the Greek and Latin Classic Authors; (2) Prose Composition in Greek, Latin, and English; (3) Ancient History, and the History of Europe to the end of the Eighteenth Century.

Second D.Lit. Examination.—The Second D.Lit. examination takes place once in each year, commencing on the first Tuesday in December. No candidate is admitted to this examination within one academical year of the time of his passing either the First D.Lit. examination or the M.A. examination in Branch I., nor unless he have given notice of his intention to the Registrar on or before the 1st of July. The *fee* for this examination, to be paid on or before the 1st of July, is £10; except in the case of candidates who have taken the degree of M.A. in Branch II. or Branch III., who are exempt from such payment.

The *examination* is in: (1) English Language, Literature, and History; and in any two of the following subjects, at the selection of the candidate, provided that either French or German be one of these: (2) French Language and Literature; (3) German Language and Literature; (4) Anglo-Saxon Language and Literature, with Icelandic Language and Literature; (5) Sanskrit Language and Literature; (6) Arabic Language and Literature; (7) Hebrew Language and Literature, with Syriac Language and Literature. The examination shall be conducted entirely by means of printed papers, and occupies three days, of which the first is devoted to the English Language, Literature, and History; and is held in the morning from ten to one, and in the afternoon from three to six. In the course of the following week the examiners publish a list of the candidates who have passed, arranged in alphabetical order. A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

Examinations in the Hebrew Text of the Old Testament, in the Greek Text of the New Testament, in the Evidences of the Christian Religion, and in Scripture History.

These examinations take place once in each year,* on Tuesday and Wednesday in the week following the conclusion of the Second B.A. examination for Honours in Classics; in the morning from ten to one,

*Candidates are required to give fourteen days' notice of their intention to present themselves at either of these examinations.

and in the afternoon from three to six. They are conducted entirely by means of printed papers. Each examiner has the power of putting a veto upon any question. No question may be put to any candidate bearing upon any doctrinal point disputed between Christians and Christians; and no question may be so put as to require an expression of religious belief on the part of the candidate. No answer or translation given by any candidate may be objected to on the ground of its expressing any peculiarity of doctrinal views.

First Examination.—No candidate is admitted to this examination unless he shall have previously passed the Second Examination for the degree of B.A. in this University.

The *examination* is in the following subjects: 1. The Hebrew Text of the Book of Genesis; 2. The Greek Text of the Gospel of St. Luke; 3. Paley's Evidences, Butler's Analogy; 4. Scripture History. Candidates who have shown a competent knowledge in any two out of the four subjects are approved by the examiners; but no candidate is placed in the First Class unless he has shown a competent knowledge in either the Hebrew Text or the Greek Text.

Further Examination.—No candidate can be admitted to this examination unless he has passed the First examination at least two years previously.

The *examination* is in the following subjects: 1. The Hebrew Text of one of the larger or two of the smaller Historical Books, and of one of the larger or two of the smaller Prophetical or Poetical Books of the Old Testament; 2. The Greek Text of one of the Historical Books, and of one of the larger or of two of the smaller Epistles of the New Testament; 3. The Evidences of the Christian Religion; 4. Biblical History, including the History of the Books of Scripture, with general questions on Biblical Criticism and the Principles of Interpretation. Candidates who have shown a competent knowledge in any three out of the four subjects of examination are approved by the examiners. In the course of the following week the examiners publish a class list. In each list the candidates are divided into three classes according to their proficiency, and are alphabetically arranged in each class; and books to the value of £5 are awarded to each candidate in the First Class at the First examination, and books to the value of £10 to each candidate in the First Class at the Further examination.

Gilchrist Exhibitions and Prize.

For Female Candidates.—1. Two exhibitions, one of £40, the other of £30 per annum, tenable for two years, are awarded to the two female candidates who pass highest at the First B.A. examination (provided

that they obtain in the one case at least two-thirds, and in the other at least three-fifths, of the total number of marks), to assist them in pursuing their studies at some collegiate institution approved by the Gilchrist Trustees. 2. A gold medal of the value of £20 (or a book prize of the same value) is awarded to the female candidate who passes highest at the Second B.A. examination, provided she obtain not less than two-thirds of the total number of marks. Further particulars may be obtained on application to the Secretary to the Gilchrist Educational Trust, 4, Broad Sanctuary, Westminster, S.W.

Bachelor of Music (*B.Mus.*).

Candidates for the degree of Bachelor of Music are required to pass two examinations.

First B.Mus. Examination.—The First B.Mus. examination takes place once in each year, and commences on the second Monday in December. No candidate is admitted to this examination unless he have passed the Matriculation examination (or taken one of the equivalent degrees) at least ten calendar months previously, and have produced a satisfactory certificate of good conduct, which must be transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, paid previously to the Registrar.*

The *examination* is in the following subjects :

The relations between Musical Sounds and the Vibrations of Sonorous Bodies, as affecting the *pitch* of the sounds; the simpler properties of Stretched Strings, and the sounds produced by them. Compound Vibrations. Nodes. The nature of Harmonics; the general theory and simpler phenomena of Compound Sounds; the theoretical nature of Consonance and Dissonance as determined by Helmholtz; the theoretical nature and values of Musical Intervals; the theoretical construction of the Modern Scales; Temperament; Melody—Time—Rhythm; the principles of the Construction of Chords; the History of Music, in so far as it relates to the growth of Musical Forms and Rules.

The examination is conducted by means of printed papers, and extends over two days; in the morning from ten to one, and in the afternoon from three to six. Candidates are not approved by the examiners unless they have shown a competent knowledge in each of the foregoing subjects. On Saturday morning in the week following the examination, the Examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order; and a Pass certificate, signed by the Registrar, is delivered to each

* The fee must be paid when the candidate inscribes his name on the Register of the University and should not be sent in advance. Information respecting the time for registration will be sent to each candidate with the acknowledgment of his certificate or notice.

candidate who may apply for it after the report of the examiners has been approved by the Senate.

Second B.Mus. Examination.—The Second B.Mus. examination takes place once in each year, commencing on the third Monday in December. Every candidate is required to have passed the First B.Mus. examination at least one year previously; he is also required to produce a satisfactory certificate of good conduct, transmitted to the Registrar at least one calendar month before the commencement of the examination. The *fee* for this examination is £5, and must be paid when the Musical Exercise required by the regulation is transmitted to the Registrar. Every candidate is required to transmit to the Registrar, at least one calendar month before the commencement of the examination, a Musical Exercise, clearly and legibly written in the proper clefs, of such length as to occupy from 20 to 40 minutes in performance, and fulfilling the following conditions: (*a*) It must be a vocal composition to any words the writer may select; (*b*) it must contain real five-part vocal counterpoint, with specimens of imitation, canon, and fugue; (*c*) it must have accompaniments for a quintett string band. The candidate will be required to make a solemn declaration that the exercise is entirely his own unaided composition. If the Exercise be approved by the examiners, the qualifications of the candidate will be further tested by an examination in the following subjects: Practical Harmony and Thorough Bass; Counterpoint, in not more than five parts, with Canon and Fugue; Form in Musical Composition; Instrumentation, so far as is necessary for understanding and reading a full score; Arranging for the Pianoforte, from an instrumental score; a critical knowledge of the full scores of such standard classical compositions as shall be announced beforehand. The candidate may also be examined, at the discretion of the examiners, on points in his own exercise. No reference to any musical instrument is allowed during the examination, unless specially directed by the examiners. The examination is in part conducted by means of printed papers, and in part *vivâ voce*; and extends over three days: Candidates are not approved by the examiners unless they have shown a competent knowledge in all the foregoing subjects.

Although technical skill in performance will constitute no part of the qualification for this degree, any candidate may offer to be examined in (*a*) Playing at sight from a five-part Vocal Score; (*b*) Playing an Accompaniment from a figured bass.* Any candidate otherwise

* Candidates desiring to offer themselves for examination in Playing must give notice to the examiners at the commencement of the written examination.

approved obtains a distinguishing mark for merit in either or both of these particulars.

On Saturday morning in the week following the examination the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

Doctor of Music (*D.Mus.*).

Every candidate for the degree of Doctor of Music is required to have obtained the degree of Bachelor of Music in this University, and to pass two subsequent examinations, for which he may present himself either in the same year (provided he have obtained the degree of Bachelor of Music at least two years previously), or in different years, as he may prefer.

First D.Mus. Examination.—The First D.Mus. examination takes place once in each year, and commences on the second Monday in December. No candidate is admitted to this examination unless he have given notice of his intention to the Registrar at least one calendar month before its commencement. The *fee* for this examination is £5, paid previously to the Registrar when the candidate inscribes his name on the Register.

The examination is in the following subjects*:

The Phenomena of Sound in general, and the general nature of Aërial Sound-waves; the special characteristics of Musical Sounds or the Physical Causes determining their *pitch*, *loudness*, and *quality*—standards of Pitch; the more elaborate phenomena of Compound Sounds; the theoretical nature of the sounds of Musical Instruments of various kinds, including the Human Voice—the principles of Stretched Strings; the theoretical nature of Musical Intervals, and the Philosophical Modes of defining and representing them—the theoretical values of the various Intervals used in Music; Musical Scales—the Scales of various nations, and of the Greeks in particular—the theoretical construction of the modern Scales; the theory of Temperament, and its various practical applications; the Greek and the Church Modes, and their relation to Modern Tonality; the history of Measured Music; the principles of Melodial Progression; the phenomena attending the combinations of Two Sounds—the various Theories proposed for the explanation of Consonance and Dissonance—Beats—Resultant or Combination Tones; the history of Harmony and Counterpoint; the theoretical nature of Chords generally, and in particular of the various Concords and Discords in ordinary use—also of Discords arising accidentally; the theoretical principles governing Progressions in Harmony, especially those connected with Discords; the theoretical principles determining the rules of

* Candidates are not required to treat these subjects mathematically; but may do so or not at their own option.

Counterpoint; the general distinction between Physical and Æsthetical or Artistic Principles, as bearing on musical forms and rules.

The examination is conducted by means of printed papers, and extends over three days; in the morning from ten to one, and in the afternoon from three to six. Candidates are not approved by the examiners unless they have shown a competent knowledge in each of the foregoing subjects. On Saturday morning in the week following the examination the examiners publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. And a Pass certificate, signed by the Registrar, is delivered to each candidate who may apply for it, after the report of the examiners has been approved by the Senate.

Second D.Mus. Examination.—The Second D.Mus. examination takes place once in each year, commencing on the third Monday in December. No candidate is admitted to it unless he has obtained the degree of Bachelor of Music at least two years previously; nor unless he has given notice to the Registrar at least two calendar months before the commencement of the examination, and has furnished evidence of having attained the age of twenty-one years. The *fee* is £5, and must be paid when the Musical Exercise required by the regulation is transmitted to the Registrar.

Every candidate is required to transmit to the Registrar, at least two calendar months before the commencement of the examination, a Musical Exercise, clearly and legibly written in the proper clefs, of such length as to occupy from 40 to 60 minutes in performance, and fulfilling the following conditions: (*a*) It must be a vocal composition to any words the writer may select. (*b*) It must contain real eight-part Vocal Harmony with good eight-part Fugal Counterpoint. (*c*) It must also contain portions for one or more solo voices. (*d*) It must have accompaniments for a full orchestra, and must contain an instrumental Overture, or Interlude, in the form of the first movement of a Classical Symphony or Sonata. The candidate will be required to make a solemn declaration that the exercise is entirely his own unaided composition.

If the exercise is approved by the examiners, the qualifications of the candidate are further tested by an examination in the following subjects: Practical Harmony of the more advanced character; Counterpoint in eight real parts, with Canon, Fugue, &c.; Form in Composition; the treatment of Voices in Composition; Instrumentation for full Orchestra; a general acquaintance with the Names and Epochs of the greatest Musical Composers, and with the character of their works; a critical knowledge, in some detail, of the great standard

Classical Compositions. The candidate may also be examined, at the discretion of the examiners, on points in his own exercise. No reference to any musical instrument will be allowed during the examination, unless specially directed by the examiners.

The examination is in part by printed papers, and part *vivâ voce*.

Candidates are not approved by the Examiners unless they have shown a competent knowledge in all the foregoing subjects. Every candidate who has passed this examination is required to conduct a public performance of his exercise (at his own expense) in a manner satisfactory to the examiners.* Although technical skill in performance will constitute no part of the qualification for this degree, any candidate may offer to be examined in (*a*) Playing at sight from a full Orchestral Score; † (*b*) Extempore Composition, in regular form, on a given subject. † Any candidate otherwise approved obtains a distinguishing mark for merit in either or both of these particulars. In the course of the following week the examiners publish a list of the candidates who have passed, arranged in alphabetical order. The musical exercise of each candidate who has passed is deposited in the Library of the University. A certificate is delivered at the Public Presentation for Degrees to each candidate who has passed.

UNIVERSITY OF DURHAM.

The Calendar sets forth:

Under a regulation passed in 1876, students who have completed their course of study and examination at any of the following Theological Colleges:—S. Aidan's, S. Augustine's, S. Bees, Chichester, Cumbrae, Edinburgh, Gloucester, Lichfield, Lincoln, the Theological Department of King's College, London, and the Theological Department of Queen's College, Birmingham—are allowed, after residing three terms at Durham, and passing the Final examination, to proceed to the Degree of B.A.

The periods of residence in the respective Faculties of Arts and Theology are equal. Graduates of Durham are allowed to proceed to the licence in Theology, and licentiates in Theology to the degree of B.A. respectively, after a further residence of either one ordinary term, or two shorter terms of five weeks each.

No student who is not a member of the Church of England is required to attend the services of that Church, and no religious test or subscription is required from any member of the University, with the exception that no person can take the licence or a degree in Theology unless he has previously declared

* The place and time of this performance are prescribed by the authorities of the University; and its scale (as regards number of voices and instruments) is arranged between the examiners and the candidate.

† Candidates desiring to be examined in Playing or Extempore Composition must give notice to the examiners at the commencement of the written examination.

in writing that he is a *bonâ fide* member of the Church of England as by law established.

Fellowships, Scholarships, and Prizes.

University Fellowships.—There are eight University fellowships, of the annual value of £120, tenable for eight years; or, if a Fellow has taken Holy Orders within a specified time, of the annual value of £150, and tenable for ten years. Candidates must be Bachelors of Arts, but are not eligible at more than three successive elections after they are admissible to that degree.

University Scholarships.—The University scholarships and exhibitions are awarded by examination, and are open to all competitors, except in cases where the contrary is specified. A necessary condition of tenure is residence in the University as a student in one of the regular courses. Students holding scholarships in Arts are required to read for Honours both in the First Year and Final examinations. The following are open to students in Arts: Six *scholarships* of the annual value of £70 each, tenable for two years; two of £40 each, tenable for two years; two of £30 each, tenable for two years; two *Entrance exhibitions* of £20 each, tenable for two years, restricted to candidates of limited means; two *Second Year scholarships* of £30 each, tenable for one year; the *University Classical scholarship*, of the value of £30, tenable for one year; the *University Mathematical scholarship*, of the value of £30, tenable for one year; a *scholarship* attached to the Durham Grammar School, of the value of £30 a year, tenable for three years; a *scholarship* of £30, tenable for one year, offered at the First Year examination in Arts each October, open to all candidates who do not hold any scholarship or exhibition (students entering from Theological Colleges may be candidates for this scholarship). No holder of a foundation scholarship of £70 a year can hold together with it a Pemberton scholarship, or any other foundation scholarship, except the Classical and Mathematical scholarships, or any scholarships or exhibitions of private foundation (exclusive of the Barry scholarship) amounting to £30 a year. No holder of a foundation scholarship of £30 a year can hold together with it a foundation scholarship of £70 a year, or scholarships or exhibitions of any kind (exclusive of the Classical, Mathematical, and Barry scholarships) amounting to £70 a year. No holder of a foundation scholarship of £40 a year can hold together with it scholarships or exhibitions of any kind (exclusive of the Classical, Mathematical, and Barry scholarships) amounting to £60 a year.

University Classical Scholarship.—This scholarship is open to every matriculated student who has not exceeded his sixth term of residence,

but cannot be held a second time by the same student. The examination is purely classical.

University Mathematical Scholarship.—This scholarship is open to every matriculated student who has not exceeded his sixth term of residence, but cannot be held a second time by the same student. The examination is purely mathematical.

Van Mildert Scholarship.—This scholarship is of the value of £50, tenable for one year, and is open to such undergraduates admitted to the examination for the degree of B.A. as are desirous of becoming students in Theology.

Gisborne Scholarship.—This scholarship is of the annual value of £30, tenable for one year, and is open to candidates for the First Year examination in Arts holding no scholarship or exhibition, and also to students entering from theological colleges in connexion with the University.

Thorp Scholarship.—This scholarship is of the annual value of £15, and is open to students of limited means, fair academic attainments, and good moral character. The nomination is made annually by the Warden, but the same student may be nominated for three years in succession.

Lindsay Scholarship.—This scholarship is of the annual value of £46, tenable for three years, and is open to natives of the diocese of Durham who have been for three years at least pupils of the Durham Grammar School. The examination is chiefly classical, but the candidates are required to exhibit a competent knowledge of Arithmetic, Scripture History, and the Geography of the New Testament.

Grammar School Exhibition.—This scholarship is of the annual value of £12, and is open to those who have been pupils of the Durham Grammar School.

Ellerton Scholarship.—This scholarship is of the annual value of £27, tenable by re-election for three years in succession, and open to natives of Yorkshire, with a preference to natives of the North Riding who have received their education at Richmond Grammar School. The candidates must be sons of parents who are members of the Church of England, must not exceed their twentieth year on the day of their first election, must be in need of such assistance, and must be competent to profit by the University lectures.

Barry Scholarship.—This scholarship is of the value of £30, tenable for one year, and is open to undergraduate students who have been pursuing their studies in the University as divinity students during three successive terms then next preceding the time of election. The candidates are required to write an essay on some subject appointed by

the Professor of Divinity: the authors of the best two essays are required to read their essays before the electors, and the scholarship is awarded to the candidate who has read his essay in the best manner.

Newby Scholarship.—This scholarship is of the annual value of £25, is open to candidates for admission and to all undergraduates who are not yet qualified by standing to present themselves for the Final examination for the degree of B.A., and is tenable by the scholar until he is so qualified.

Bishop Maltby founded an *exhibition* of the annual value of £10, tenable for one year, with a preference to members of Bp. Hatfield's Hall.

Medical Scholarships.—*See* "Guide to the Medical Profession."

Theological Scholarships and Exhibitions.—The following are open to students in Theology: Six *scholarships* of £60 a year each, tenable for two years; two of £30 a year, tenable for two years; two *exhibitions* of £30 a year each, tenable for one year; six of £20 a year each, tenable for two years—open only to persons of limited means; two of £30 a year each, tenable for one year by Theological students in their second year; two of £40 a year each, tenable for one year, open to graduates of Durham or of any other university in which the examinations are of a similar character to those required in this University. The exhibitions are payable after the examination for a Licence in Theology has been passed.

Exhibitions granted by Lord Crewe's and Bishop Barrington's Trustees are tenable at the University of Durham. The *Barrington exhibitions* are held by sons of clergymen in the diocese of Durham. *Exhibitions* are also granted annually by the *Warden* and *Senate* for the assistance of deserving students of limited means. One *Prize exhibition* of £30 and two of £25 each are open to competition at the Final examination in Theology in the Easter term; and one of £30 and one of £25 each in the Michaelmas term. *Classical* and *Mathematical prizes* are given every year.

Mrs. Long's Reading Prize.—This prize is of the value of £6, is offered annually, and is open to all students of the University.

Hellenistic Greek Prize.—This prize is of the value of £10, is offered annually, and is open to students of not more than three years from matriculation.

Foreign Languages Prize.—This prize is of the value of £5, is open to all students of the University, and is offered annually.

Thompson History Prize.—This prize is of the value of £10, and is open to graduates of not more than six years' standing.

There is also a *Prize Fund* from which prizes are awarded at the terminal examinations.

Subjects of Examinations.

Arts Course.—The course in Arts includes two public examinations—the one at the end of the first year, and the Final examination at the end of the second year, for the degree of B.A. Students are admitted to this course after a Matriculation examination, which is of an elementary character, except in the case of candidates for scholarships and exhibitions. The subjects are as follows: *Entrance for Admission as Ordinary Students* (varied from time to time): The rudiments of the Christian Religion; portions of Greek and Latin authors; Arithmetic; Euclid, i., or Algebra, including simple equations.

EXTRACTS FROM THE REGULATIONS.

Of Terms.

1. The academical year shall consist of twenty-six weeks divided into three terms, which shall be called respectively Michaelmas, Epiphany, and Easter Terms.

Of Admission.

1. No one shall be held to be a member of the University who has not been matriculated, that is, whose name has not been placed on the Register of the University by the authority of the Warden, nor unless he has produced to the Warden satisfactory testimonials of character.

2. Every student, at the time of his admission to residence, shall subscribe a declaration of obedience to the authorities of the University.

3. Candidates for admission as students in Arts, or as students in Civil Law, are required to pass an examination in the Rudiments of the Christian Religion, in the Greek and Latin Languages, and in Arithmetic and the Elements of Mathematics.

4. A candidate for admission, who may have failed to pass the requisite examination, shall nevertheless be admissible by the Warden, on the recommendation of the examiners, as a Probationary Student in Arts.

Probationary students in Arts shall be admitted as regular students in Arts, after passing such examination, and under such conditions as may be determined by the Warden and Senate.

Any term kept by a probationary student in Arts may, with the consent of the Warden and Senate, be counted as a Term kept by a regular student in Arts.

5. Anyone who has completed his course of study and examinations at any of the following Theological Colleges:—S. Aidan's, S. Augustine's, S. Bees', Chichester, Cumbrae, Edinburgh, Gloucester, Lichfield, Lincoln, the Theological Department of King's College, London, or the Theological Department of Queen's College, Birmingham—and has produced to the Warden satisfactory testimonials of character, shall be admitted as a student in Arts without further examination.

6. Any student of the University of Durham who has passed the examination

for the degree of Bachelor of Arts, and has produced to the Warden satisfactory testimonials of character, shall be admissible as a student in Theology.

7. Any student of the University of Durham who, having passed the First examination in Arts, shall have completed the residence required for admission to the Final examination in Arts at a time when no such examination is appointed to be held, shall be allowed, with the consent of the Warden and Senate, to keep the ensuing ordinary term, or a shorter term of five weeks, as a student in Theology.

8. Anyone who has completed his course of study and examinations at St. Bees' College, and has produced to the Warden satisfactory testimonials of character, shall be admissible as a student in Theology.

9. Anyone who has passed the examination for the degree of B.A. or any higher degree at another University, and has produced to the Warden satisfactory testimonials of character, shall be admissible as a student in Theology, provided that the examination he has passed for that degree is of a similar character to that required at this University.

10. Any person who has attained the age of nineteen years, has produced to the Warden satisfactory testimonials of character, and has passed the requisite examination, shall be admissible as a student in Theology.

This examination shall be conducted by two or more examiners appointed by the Warden and approved by Convocation; and shall be directed to the Greek and Latin Languages and the elements of Theology.

11. A candidate for admission who may have failed to pass the requisite examination shall nevertheless be admissible by the Warden, on the recommendation of the examiners, as a Probationary Student in Theology.

Probationary students in Theology shall be admitted as regular students in Theology after passing such examination, and under such conditions as may be determined by the Warden and Senate.

Any term kept by a probationary student in Theology may, with the consent of the Warden and Senate, be counted as a term kept by a regular student in Theology.

Of the Standing and Exercises requisite for proceeding to the Degree of Bachelor of Arts.

1. No grace for the degree of Bachelor of Arts shall be granted unless the petitioner is a student in Arts, and has kept six terms, at least, by residence, excepting as provided in Class 2 of this Section.

Any student in Theology who is recommended by his College, may petition the University that terms kept by him as a student in Theology may count as terms kept by him as a student in Arts, provided that he shall have passed the examination appointed for the admission of students in Arts, and that he shall not be admissible to the Final examination for the degree of Bachelor of Arts unless he has kept three terms at least as a student in Arts.

2. No grace for the degree of Bachelor of Arts shall be granted unless the petitioner has passed two public examinations. The first of these shall be for

students who have kept three terms at least; the second for such as have passed the First and have kept six terms at least; or have passed the Final examination for the licence in Theology, having previously resided six terms at least in the University of Durham, and have further resided one ordinary term, or two shorter terms of five weeks each, as students in Arts.

Any student who, having passed the Previous public examination in Theology, shall have completed the residence required for admission to the Final examination for the Licence in Theology at a time when no such examination is appointed to be held, shall be allowed, with the consent of the Warden and Senate, to keep the ensuing term, either as an ordinary term, or as a short term, as a student in Arts; and such term shall count as though it had been kept after the examination for the Licence in Theology had been passed..

Students who have been admitted under the 5th clause of Title ii. (*i.e.*, "*Of Admission*") shall be allowed to count the Final examination of their college in lieu of the First public examination, and shall be admissible to the Final examination for the degree of Bachelor of Arts, after they have kept three terms at least by residence as students in Arts.

3. The first of these examinations shall be conducted by three examiners, nominated annually by the Warden and approved by Convocation. The subjects and books to which it shall be directed shall be fixed by the Senate eleven months at least before its commencement; the subjects and books fixed for candidates for Honours being distinguished from the subjects and books fixed for other students.

Everyone admitted to this examination shall be required to prove his knowledge of Scripture History, of two Gospels in the Greek, of one Greek and one Latin book *melioris ævi et notæ*, of Arithmetic, and either of the first three books of Euclid or of Logic, and shall be examined in English Composition.

All those who satisfy the examiners shall receive certificates, and shall be classed according to their attainments. The number of classes shall be determined by the examiners, but the order of the names in each class shall be alphabetical. The examiners shall distinguish the Honour classes from the other classes.

4. The Second and Final examination shall be conducted by three examiners, at least, nominated annually by the Warden, and approved by Convocation. Everyone who is admitted to it shall be required to prove his knowledge of the Evidences of Religion, Natural and Revealed, of one Gospel, and of the Acts of the Apostles in the Greek, and shall be examined in English Composition.

Students who are not candidates for Honours shall, in addition to the Evidences, one Gospel, the Acts of the Apostles, and English Composition, be required to prove their knowledge of one Greek and one Latin book, *melioris ævi et notæ*, approved by the Senate, and of two at least, of the five following subjects—namely, the first four books of Euclid, some subject in Physical Science, some period of Modern History, Hebrew, and some modern Foreign

Language. The subject of Physical Science, and the period of Modern History, and the modern Foreign Language, shall be fixed by the Senate eleven months, at least, before. The student may, if he chooses, be examined in all these five subjects.

Candidates for Honours shall, in addition to the Evidences, one Gospel, the Acts of the Apostles, and English Composition, be examined in such subjects and books in Classical and General Literature, and Mathematical and Physical Science, as shall have been fixed by the Senate eleven months, at least, before the examination; they may be examined also in other subjects and books selected by themselves, provided these subjects and books shall have been submitted to the Senate and approved by it six months, at least, before the examination.

Candidates for Classical Honours only need not be examined in Mathematics, nor candidates for Mathematical Honours only in Classics. Every candidate for Classical Honours shall be examined both *vivâ voce* and on paper.

The examination for Mathematical Honours may be conducted, if the Warden thinks fit, by separate examiners nominated by the Warden and approved by Convocation.

All who satisfy the examiners shall receive certificates and shall be classed. For those who are judged worthy of distinction there shall be two separate classifications—one for such as have distinguished themselves in Classical and General Literature, and the other for such as have distinguished themselves in Mathematical and Physical Science. In each of these classifications there shall be four classes; the examiners being at liberty to leave any one or more of these classes vacant. For those who are not judged worthy of distinction there shall be no classification, but the examiners may, if they think fit, divide the candidates by a line into two parts.

Students, not candidates for Honours, shall be allowed, with the consent of the Warden and Senate, to take up one or more honour subjects, with a view to obtaining an honorary class.

5. In all cases in which an undergraduate is admitted from another university, or a student of this university, not originally a student in Arts, becomes a student in Arts, such students shall be required to keep three terms by residence as a student in Arts before he is admitted to the Final examination for the degree of B.A.

6. Students of the Durham University College of Medicine, or of the Durham University College of Physical Science at Newcastle-upon-Tyne, may petition the University that terms kept by them at either of these colleges, equivalent in duration to three terms kept by students in Arts at Durham, may count towards the degree of B.A., provided that they shall have passed the First examination appointed for students in Arts which really takes place at the beginning of the second year, and that they shall not be admitted to the Final examination for the degree of B.A. unless they have kept three terms, at least, by residence as students in Arts at Durham.

Of the Standing and Exercises requisite for proceeding to the Degree of Bachelor of Science.

1. Students who have obtained the academical rank of Associate in Physical Science shall be admissible to the degree of Bachelor of Science, provided not less than two years shall have intervened from the time of their being made Associates, after passing an examination in not less than six of the following subjects: 1. Mathematics, Pure and Applied; 2. Physics; 3. Chemistry; 4. Geology; 5. Engineering; 6. Biology; 7. Either Latin or Greek; 8. Either French or German. The two last of these subjects shall be compulsory.

2. Candidates who have previously passed the examination for a B.A. degree at Durham, or the examination appointed for students in Arts at their first year, shall be exempt from examination in subject 7.

Of the Standing and Exercises requisite for proceeding to the Degree of Master of Arts.

1. No grace for the degree of Master of Arts shall be granted unless the petitioner is a Bachelor of Arts, of the standing of nine terms, at least, from his admission to that degree.

2. Any Bachelor of Arts of the requisite standing, who has obtained Honours at the Final examination for the degree of Bachelor of Arts, or who, after passing the Final examination for the degree of Bachelor of Arts, has passed either the examination for a Licence in Theology, or the examination for the degree of Bachelor in Civil Law, or the examination for a Licence in Medicine, shall be admissible to the degree of Master of Arts, without further examinations or exercises. Other candidates for the degree of Master of Arts shall pass such examinations or perform such exercises as the Senate may require.

Of the Standing and Exercises requisite for proceeding to the Degree of Master in Science.

No grace for the degree of Master in Science shall be granted unless the petitioner is a Bachelor of Science of the standing of two years, at least, from his admission to that degree, nor unless he has satisfied the examiners appointed by the University in some branch of one of the scientific studies professed in the College of Physical Science.

Of the Standing and Exercises requisite for proceeding to Degrees in Theology and Civil Law.

1. No grace for the degree of Bachelor of Divinity shall be granted unless the petitioner is a Master of Arts, of the standing of thirty terms at least from the date of his admission to the degree of Bachelor of Arts, and of three terms at least from the date of his admission to the degree of Master of Arts, nor unless he has passed the examination appointed for students in Theology, and has been admitted into Holy Orders, nor unless he has performed the exercises required by the Senate.

No grace for the degree of Doctor of Divinity shall be granted unless the

petitioner is a Bachelor of Divinity, of the standing of forty-two terms at least from the date of his admission to the degree of Bachelor of Arts, nor unless he has performed the exercises required by the Senate.

2. No grace for the degree of Bachelor of Civil Law shall be granted unless the petitioner is of the standing of twelve terms at least from the date of his admission to the degree of Bachelor of Arts, and also the examination in Civil Law appointed by the Senate.

No grace for the degree of Doctor of Civil Law shall be granted unless the petitioner is a Bachelor of Civil Law of the standing of twenty-four terms at least from the date of his admission to the degree of Bachelor of Arts, nor unless he has performed the exercises required by the Senate.

Of the Standing and Exercises requisite for the Licences of Students in Theology.

1. Students in Theology shall be licensed to present themselves to the Bishop for Ordination, by grace of the University.

2. No such grace shall be granted unless the petitioner has kept the requisite number of terms as a student in Theology, is of approved moral and religious character, and of competent attainments.

The period of residence required of a student who has been admitted under the 6th or 8th clause of Title ii. (*i.e.*, "*Of Admission*") shall be one ordinary term, or two shorter terms of five weeks each; that required of a student who has been admitted under the 9th clause of Title ii. shall be three terms; and that required of any other student six terms.

In proof of his moral and religious character, the petitioner shall present testimonials from the proctors, and from his college, hall or house.

In proof of his attainments, he shall produce a certificate of having passed a public examination in Theology. This examination shall be conducted by three or more examiners, nominated annually, or oftener if necessary, by the Warden, and approved by Convocation, and shall be directed to such subjects as have been fixed by the Senate eleven months at least before its commencement.

Any student who has been admitted under the 6th or 8th clause of Title ii. (*i.e.*, "*Of Admission*") shall be admissible to this examination in or after the first ordinary or second shorter term of his residence; and any student who has been admitted under the 9th clause of Title ii. shall be admissible to the examination in or after the third term of his residence.

No other student shall be admissible to it before his sixth term, nor unless he has passed a previous public examination. This examination shall be conducted by two or more examiners, nominated annually by the Warden, and approved by Convocation. No student shall be admissible to this examination unless he has kept three terms at least by residence in the University.

Any student in Arts, who is recommended by his college, may petition the University that terms kept by him as a student in Arts may count as terms kept as a student in Theology, provided that the terms so counted shall have been kept after the age required for admission as a student in Theology, and

that he shall have passed the examination appointed for the admission of students in Theology, and that no one shall be admissible to the Final examination for the Licence in Theology unless he has kept three terms at least as a student in Theology.

3. No such grace shall be granted unless the petitioner has previously declared in writing that he is a *bonâ fide* member of the United Church of England and Ireland as by law established.

On Probationary Students in Theology.—Order of Senate, made December 18, 1845, *and amended November* 27, 1866.

A probationary student in Theology shall be admissible to any subsequent Examination for Admission of students in Theology; and if he passes it, he shall be placed in the same position with regular students in Theology of the same standing. If he has kept three or more terms by residence without passing the ordinary examination for admission, he shall be admissible, with the consent of his college, hall, or house, to the examination appointed for students in Theology at the end of their first year.

Besides the ordinary subjects of examination, he shall be examined in one Greek Classical work, or in one or more books of the Greek Testament, appointed by the Warden and Senate.

If he passes this examination, and is recommended by the examiners, he shall be placed in the same position with regular students in Theology, of the same standing, who have passed the examination appointed at the end of their first year.

If he passes this examination without obtaining a recommendation from the examiners, he shall be placed in the same position with regular students in Theology of the same standing who have not passed the examination appointed at the end of the first year.

Of Students of the University of Durham College of Physical Science, Newcastle-upon-Tyne, and of the Standing and Exercises requisite for the Academical Rank of Associates in Physical Science, and of Mechanical, Mining, and Civil Engineer.

1. Students of the College of Physical Science are admitted members of the University in accordance with the Regulations, Title II. (*i.e.*, "*Of Admission*"), 1, 2.

2. No one shall be admitted to be a regular student of the College of Physical Science who has not passed an examination in the following subjects, viz.: Reading, Writing from Dictation, English or Latin Grammar, Arithmetic (including Decimals), and Geography.

3. The course of study shall extend over two years at least, which shall each contain three terms.

4. Students in Physical Science who shall have completed their course shall be admissible, by grace of the University, to the academical rank of Associate in Physical Science.

5. No grace for admission to this rank shall be granted unless the petitioner shall have passed two public examinations, to be conducted at Newcastle-upon-Tyne.

6. The first of these examinations shall be conducted by three or more examiners, appointed by the Council of the College of Physical Science, and shall be in the subjects appointed for students of the first year in the College of Physical Science. No student shall be admitted to this examination till he is in his third term of residence at least from the date of his matriculation.

7. The Second examination shall be conducted by three examiners at least, of whom one shall be nominated by the Warden and the others by the Council of the College of Physical Science, and who shall be approved by Convocation; and it shall have reference to the following subjects appointed for students of the second year in the College of Physical Science: (*a*) For Pass—(*b*) For Honours: The subjects named for Pass and Honours in the prospectus of the College of Physical Science for the examination of students at the end of their second year. No student shall be admitted to this examination till he has passed the first examination, and is in his sixth term of residence at least from the date of his matriculation.

8. All those who satisfy the examiners at either of these examinations shall be classed.

9. Any student in Arts, after passing the first public examination appointed for students in Arts, may, by permission of the Council, proceed as a student of Physical Science of the second year, provided he has also passed the examination appointed for students of Physical Science at the end of their first year.

10. Associates in Physical Science who, after their admission to this rank, have been engaged for three years at least in some practical work of Mechanical, Mining, or Civil Engineering approved by the Council of the College of Physical Science, and have subsequently passed a further examination having principally reference to the work in which they have been engaged, shall be admissible, by grace of the University, to the title of Mechanical, Mining, or Civil Engineer of the University of Durham.

Of the Affiliation of Codrington College, Barbados, and Fourah Bay College, Sierra Leone, to the University.

1. Students of Codrington College, Barbados, and Fourah Bay College, Sierra Leone, may have their names placed on the Register of the University as matriculated students of the same, provided that the Principal of their college, or other person authorised to act in his behalf, shall have certified to the Warden that they have passed an examination similar to that required for the admission of students, in the several faculties, in the University of Durham; and the aforesaid Colleges shall be accounted affiliated Colleges of the University of Durham.

2. Students of the affiliated colleges, having been so matriculated, shall be admissible to the exercises and public examinations required for proceeding to degrees, licences, and academical ranks in the several Faculties, provided that

they shall have forwarded to the Warden certificates of having fulfilled the same conditions as to residence, attendance at lectures, and conformity to discipline, in their own college, as are required from other students of the University so admissible, terms of residence being counted from the time of passing the Admission examination of their own College.

3. The principals of the said colleges shall forward to the Senior Proctor lists of students of their respective colleges who are candidates for any examinations, together with the certificates required, in time for them to be received at Durham four weeks at least (and, in the case of candidates for Honours, six weeks at least) before the commencement of the examinations at Durham. The examination papers shall be sent to the principals of the colleges, in sealed packets, by the last mails that leave England previously to the commencement of the examination at Durham. The papers so sent shall be set to the candidates as soon as possible after their arrival, and the answers to them returned, unread, as soon as possible after the conclusion of the examination, to the Senior Proctor (who shall transmit them to the examiners), together with a certificate, signed by the principal of each college, or the person acting in his behalf, that the examination has been duly conducted, and the above-named conditions complied with.

4. The examiners, after examining the papers, shall issue and publish in the usual manner supplemental lists of those who have passed the examination, and of those who have been adjudged worthy of honours; which lists shall be sent by the Registrar without delay to the respective principals of the colleges; and one combined list of all who have passed the examination, in England, Barbados, and Sierra Leone, shall be inserted in the next issue of the "University Calendar."

5. All prescribed conditions having been fulfilled, graces for degrees, licences, or academical ranks, shall be prayed in Convocation, in the usual manner, on behalf of students of the affiliated colleges; and certificates of such graces having been granted shall be forwarded by the Registrar to the respective principals of the colleges; after the receipt of which the degrees, licences, or academical ranks for which graces have been granted may be conferred by their lordships the Bishops of the dioceses in which the affiliated colleges are respectively situated, as Visitors of the same, acting under commission from the Warden.

Of Admission from other Universities.

Any person, upon being duly matriculated, shall be allowed, with the consent of the Senate, to count terms which have been kept in another university under conditions similar to those required in this University, due regard being paid to the number and length of the terms into which the year is divided in each.

Any person, upon being duly matriculated, shall be admissible, by grace of the University, to the same degree which he possesses in the University of Oxford, Cambridge, Dublin, and in any other university, provided that his degree has been conferred on conditions similar to those required in this University.

Of Honorary Degrees.

Any graduate of another University, or any other distinguished person, shall be admissible by grace of the University to an honorary degree.

Every person who has been so admitted to an honorary degree shall enjoy the rank and wear the dress of his degree, and shall have admission to the Library and Museums under such restrictions as may be imposed from time to time; but shall have no claim to a vote in Convocation.

College Regulations.

1. Applicants for admission present to the Warden a certificate of their age. They also bring testimonials to their character and conduct during the two previous years.

2. At the time of admission, the applicant subscribes his name to a declaration of obedience.

3. Students are required to be present at dinner in hall, and, if members of the Church of England, at chapel prayers, or at Cathedral service, at the times appointed. They are also required to attend such lectures of the professors and tutors, and such other lectures as the College authorities may direct.

4. No day counts as a day of residence, unless the student has been present on all the occasions required; and if he absents himself on more than one occasion he is *liable* to lose a day for each non-appearance. The Censor or other officer under whose notice the irregularity has come will signify the loss of the day by a cross in the Censor's book.

The parent or guardian of every student has the option of putting his bills, contracted out of College, under the control of the Tutor.

University and College Expenses.

I. UNIVERSITY.—Admission fee, £2.

Terminal Expenses.—Tuition, including fees to the professors of the University, £4 10s.; Censors' fee, 10s.; University chest, 10s.; University library, 10s. Non-resident students, who are not Bachelors of Arts, or Licentiates in Theology, pay terminally 10s. to the chest, 10s. to the Library, and, if members of a college, hall, or house, 10s. to such college, hall, or house. These payments are not required from students who have been prevented by illness from keeping any term or terms, nor in any case for more than three terms of non-residence. Fee on admission to any ordinary public examination, £1. The following are the fees payable upon admission to each degree, &c.: B.A., £3; Associate in Physical Science, £1; Mining Engineer, £3; Civil Engineer, £3; B.Sc., £4; Licentiate in Theology, £3 (or for a B.A. £1); M.A., £6; B.D., £6; D.D., £10; B.C.L., £6; D.C.L., £10; Licentiate in Medicine, £3; M.C., £3; M.B., £6; M.D., £6; ad eundem, £1.

II. COLLEGE.—*At University College*: *Caution money, £15. *Terminal*

* This is a guarantee fund against loss by terminal defalcation, and is returned to a student when he leaves the University, if his debts to the College have been discharged.

Expenses: Rent of college rooms, unfurnished*, £5; College commons, comprising dinner and meat luncheon, *per week*, 16s. 6d.; Service and gas, £3 15s.; Fire for hall and kitchen, £1 2s. 6d.; Fire for rooms, according to consumption; Detriments, £1 1s. Every B.A., in order to count terms, pays terminally to the College 5s. until he is of sufficient standing to take the degree of M.A.; or he may compound for this charge by a payment of £1 1s., made to the college upon his taking the degree of B.A. Upon admission to the high table £2 is paid to the College by those members who have proceeded to their degrees in Arts at Durham, and £5 by those who have been admitted *ad eundem* from other universities. All fellows and late fellows of the University, though not members of the College, may become members of the College high table.

Annual Expenses.—College—board and lodging for three terms, £60 to £80; University—Tuition Fees, &c., for three terms, £18; Examination Fee, £1—£79 to £99.

Other University Expenses—Not Annual.—Entrance fee, £2; cap and gown, £1 17s. 6d.; fee for licence or degree, £3—£6 17s. 6d. Licentiate's hood, £2 2s.; B.A.'s hood, £1 1s. From the above statement it will be seen that the total expenses for the full course of six terms may be calculated at from £165 to £200; for the short course of three terms at from £86 to £100. Travelling expenses and the vacations are *not* included in this calculation. Members of University College have the use of the University Gymnasium *gratis*.

At Bishop Hatfield's Hall.—This hall was opened in the year 1846, with the especial object of providing an economical education in the University for students of limited means. The following are the Expenses of Students at this Hall: Caution Money, £15†; Admission Fee, £2. *Terminal Expenses, including fees to the University*: University fees for tuition, Library, &c., £6; a set of rooms, furnished (linen excepted), £5 5s. to £7 7s.; Commons or board, including servants and all domestic charges (washing excepted), £10—total for the term, £21 5s. to £23 7s. N.B.—An additional charge is made for beer or extra commons.

No allowance is made for short absences permitted to students for their own convenience during or at the beginning or end of term. The linen which students should bring with them includes sheets, pillow-cases, and towels. Clergy, married students, and some others, are allowed to live in licensed lodgings and to provide partially for themselves on condition that they attend evening chapel and dine regularly in the hall. In such cases the caution money is reduced to £5 and the terminal battels to £5 10s. Students are admissible at the beginning of every term. Application for admission must be made to the

* Students usually buy the furniture of their predecessors at a valuation, and sell it to their successors. Valuations vary from £10 to £23. Furnished rooms can frequently be obtained, if desired, at from six to seven guineas a term.

† This is returned to the Student on his leaving the University, if his debts to the Hall have been discharged.

Principal of Bishop Hatfield's Hall. Every applicant for admission is required to produce testimonials to character and a certificate of his baptism.

Annual Expenses.—Hall: Board and lodging for three terms, £46 to £60; University: Tuition fees, &c., for three terms, £18; examination fee, £1—£65 to £79.

Other University Expenses—Not Annual.—Admission fee (as above), £2; cap and gown, £1 17s. 6d.; fee for licence or degree, £3—£6 17s. 6d. Licentiate's hood, £2 2s.; B.A.'s hood, £1 1s.

From the above statement it will be seen that the total expenses for the full course of six terms may be calculated at from £137 to £165; for the short course of three terms at from £72 to £86. A small addition to the above should be made for books, subscriptions to clubs, &c.

College of Physical Science, Newcastle-upon-Tyne.

Terms.—The session is divided into the following terms: Michaelmas term, from October to the middle of December; Epiphany term, from January to the end of March; Easter term, from the middle of April to the middle of June.

College Regulations.

1. Students must have attained the age of fifteen years, and must sign a declaration of conformity to the standing regulations of the College.

2. Class tickets will be issued by the Secretary. All class tickets must be presented to the professor for registration before the student's name can be inserted in the class list.

3. In addition to the class fees, students will be required to pay an entrance fee of £1 1s. Students who do not enter to more than two classes may commute this, on payment of 7s. entrance fee for each course.

4. Students desirous of studying the whole of the four subjects originally professed in the College, namely, Mathematics, Experimental Physics, Chemistry, and Geology, may compound for the class fees, by payment of £17 17s.

5. Periodical examinations, written and *vivâ voce*, will be held in the various classes. Students failing to pass these examinations, without satisfactory reason assigned, will not be entitled to certificates of class attendance.

6. Students attending the courses of Physics and Chemistry will not be entitled to certificates of class attendance unless they have attended the respective laboratories. Students in Geology will similarly be expected to attend the Saturday field-days of the Geological Surveying Class.

7. The scientific works belonging to the Literary and Philosophical Society and the Institute of Mining and Mechanical Engineers, within the Wood Memorial Hall, will be at the service of students for the purpose of reference or study. Tickets of admission must be obtained from the Secretary, and 10s. 6d. must be deposited as caution money by each student on obtaining his ticket.

A certificate of attendance at not less than three of the regular

classes of the College, during a period of not less than one session, is accepted in lieu of one year's practical experience by the Boards of Examination for the mining districts of Northumberland, Cumberland, Westmoreland, Durham, and the North Riding of Yorkshire.

Students under the age of eighteen years, regularly attending the College, can obtain passes to Newcastle on the North-Eastern Railway at half the usual rates, on the production of a certificate signed by the Principal.

Courses of Study.—Students will be distinguished into Regular and Occasional. Regular students will be required to follow such a course of study in the subjects professed in the College as will enable them to pass the examinations for the title of Associate in Physical Science. Regular students are required to wear the academical dress of the undergraduates in the Faculty of Arts of the University when attending the lectures, examinations, and public meetings of the College. Occasional students will attend such classes as they may select. Every candidate for admission as a regular student must pass an examination on entrance, in Reading, Writing from Dictation, English or Latin Grammar, Arithmetic (including decimals), and Geography.* Registered students in Medicine are exempted from this examination, or students who produce a certificate of having passed either of the two following examinations: 1. Durham Senior Examination of Persons not Members of the University, held in June; 2. Durham Examination for Students in Arts in their first year, or any examination of a similar nature that may be accepted by the Council.

Associateship in Physical Science. — The regulations for this Associateship are:

1. Every candidate for the Associateship in Physical Science will be required to satisfy the examiners in three, at least, of the four subjects—Mathematics, Physics, Chemistry, and Geology—in an examination to be held at the beginning of the candidate's second year.

2. Every candidate who has been examined in three only of these subjects at the beginning of the second year shall, during or at the end of that year, pass an examination in the fourth subject.

3. Every candidate shall, during either the first or second year, attend the course of the Professor of Natural History, and, at the close of the session, pass an examination in that subject.

4. At the end of the second year, every such candidate shall pass an examination in the higher parts of two of the subjects in the elementary parts of which the candidate passed an examination at the beginning of the second year.

5. Students shall not be admitted to any of these examinations without pro-

* Such a knowledge of geography will be expected as can be obtained from Grove's Primer of Geography, and Chambers' Standard Geography, Parts I., II., III.

ducing certificates of satisfactory attendance at the Lectures of the professors of the subjects in which they are to be examined.

6. Students who enter in January may pass their First examination in January, and their Final examination in December, of the following year.

7. The fee for a First examination shall be 10s. 6d.; and for the Final examination, £1 1s.

Subjects of Examination at commencement of Second Year.—In October, 1881, the subjects were as follows: *Mathematics*: Euclid, books i., ii., iii., iv., vi., xi.; Theory of Arithmetic; Algebra, as far as the Binomial Theorem; Trigonometry, including the Solution of Triangles, and the Theory of Logarithms; the Principles of Statics treated geometrically; the Properties of the Conic Sections treated geometrically. *Experimental Physics*: Elements of Applied Mechanics—First Principles of Statics in Solid and Fluid Bodies, and of Dynamics, considered practically; Elements of Sound, Light, Heat, and Electricity — Simple effects of Heat — Thermometry — Radiation and Conduction—Change of State—Simple experimental properties of Sound and Light, and of Statical Electricity—Forms of Galvanic Batteries, and the properties of Constant Currents of Electricity. Proficiency in the use of Instruments of Precision relating to the elementary course is tested by a Practical examination. *Chemistry*: General Principles of Chemistry; Elements of Inorganic Chemistry, Elements of Qualitative Analysis, including a practical examination. *Geology*: Physical Geology and Elementary Lithology; British Historical Geology. *Natural History*: Elements of Comparative Anatomy and Physiology; Vegetable Organography and Physiology; Systematic Zoology. *Exhibitions* of £15 each, tenable for one year, may be awarded to candidates not already holding an exhibition in the College, who show sufficient merit in the above examination.

Subjects at end of Second Year.—For June, 1882, the subjects were any two of the following: *Mathematics*: Analytical Geometry of two Dimensions; the Elements of the Differential and Integral Calculus, with one independent variable; Statics, restricted to forces acting in one plane; Theory of the Motion of a particle in one plane; the Elementary parts of Hydrostatics, treated mathematically. *Experimental Physics*: Applied Mechanics—Strength of Materials, and of Mechanical Agents and Resistances—Examples of Statics in Solid and Fluid Bodies—Simple Applications of D'Alembert's Principle to the Motion of a Particle (uniform circular, and simple Pendulum), of a Solid (Balance, and Fly-wheel), and of Fluid Bodies (Rate of uniform Efflux). Heat—Its general Effects, Measurement,

and Mechanical Equivalence; including the elements of Thermodynamics in their relation to the use of Steam in the Steam Engine. Sound and Light—Mechanical Properties of Sound. Experimental Laws of Light. Physical Properties of Light, including simple phenomena of Plane-polarization. Magnetism and Electricity—Magnetic Properties of Substances, and Measurements of Magnetic Forces. Sources of Frictional Electricity, and laws of its Inductive action. Sources and Measurements of Electrical Currents. Laws of their Induction; and of their mutual action on each other, and on Magnets. Proficiency in constructing and using apparatus for Physical determinations, will be tested by a Practical Examination. *Chemistry*: Elements of Organic Chemistry; Elements of Applied Chemistry; Advanced Qualitative Analysis, including a Practical examination; Elements of Quantitative Analysis. *Geology*: Descriptive Lithology; Palæontology; Applied Geology.

Classes.

Mathematics.—Elementary Junior Class; Advanced Junior Class; Senior Class. Exercise Class, for the students of all the above classes.

The *Elementary Class for Junior Students* is intended for those who have very little previous knowledge, and the subjects for lectures will be: Euclid, books i., ii., iii., iv., vi., and the definitions of book v.; Arithmetic; Algebra, as far as the class is able to go. *Text books*: Todhunter's edition of "Euclid's Elements"; Barnard Smith's "Arithmetic"; Todhunter's "Algebra for Beginners."

The *Advanced Junior Class* is intended for students who have mastered the first two or three books of Euclid, and the elementary parts of Algebra, and are thoroughly familiar with practical Arithmetic. The subjects taken up are: Euclid, books iii., iv., vi., xi.; Algebra, as far as the Binomial Theorem; Trigonometry, including the Solution of Triangles and the theory of Logarithms; the principles of Statics and the properties of Conic Sections, treated geometrically. *Text books*: Todhunter's "Algebra," Todhunter's "Trigonometry for Beginners," Todhunter's "Mechanics for Beginners," Besant's "Geometrical Conic Sections."

The *Senior Class* is intended for students acquainted with the subjects treated of in the advanced Junior Class, and takes Analytical Geometry of two dimensions; the Elements of the Differential and Integral Calculus, with one independent variable; Higher Statics and Dynamics treating of forces in one plane; the elementary parts of Hydrostatics treated mathematically. A class will also be held, if

required, to go through the subjects of the examination for the degree of B.Sc.

Fee for each class, 5 guineas.

The *Exercise Class* is intended to give an opportunity for working examples on the subjects of the lectures, and is open to the members of all the above classes.

Experimental Physics. — Junior Class. — First Year course: Mechanics, Heat, and Electricity. *Division I.*: Practical Mechanics: The Use and Strength of Materials in mechanical combinations—Elements of Dynamics, Construction and use of Hydraulic and Pneumatic Machines. *Text books*: Wormell's "Mechanics," Galbraith and Haughton's "Hydrostatics," Tate's "Exercises in Mechanics." *Division II.*: General Effects of Heat. Dilatation—Construction and use of Thermometers—Conduction and Radiation, Fusion, and Evaporation—Measurement of Gases and Vapours. *Text books* in this and the next division: Lee's "Acoustics, Light and Heat," Orme's "Heat," Box's "Practical Treatise on Heat." *Division III.*: Production and Transmission of Sound—Optical Reflection and Refraction—Statical Electricity—Frictional Electrical Machines—Electrophorus, Leyden jar, and other demonstrations of the laws of Statical Induction, Galvanic Electricity — Sources, and general effects — Constant Batteries—Heat and Magnetic effects—Use of Voltameters and Galvanometers; Electro-Magnetism; Induced Currents and their properties. *Text books*: Fleming Jenkins' "Elementary Manual of Electricity," Ferguson's "Electricity."

Senior Class.—Second Year course: Advanced Mechanics, and Heat; Sound and Light, Magnetism and Electricity. *Division I.*: Applications of general Principles of Force in Machines and Fluid Bodies; Virtual Velocities; D'Alembert's Principle—Conservation of Energy; Elements of Mechanism—Circular and Pendulum Motion—Efflux of Fluids; Quantitative Measures of Heat (Specific, Latent, and of Combination), and their Mechanical Equivalence (including the mechanical use and thermal properties of Steam). *Text books*: Twisden's "Practical Mechanics," Goodeve's "Elements of Mechanism" and "The Steam Engine," Balfour Stewart's "Elementary Treatise on Heat." *Division II.*: Experimental Properties, and the Physical Theories of Sound and Light, including Polarization and Double-refraction of Light in uniaxal crystals, and Spectrum Analysis. *Text books*: Lees' "Acoustics, Light, and Heat," Galbraith and Haughton's "Optics," Spottiswoode's "Polarized Light," Lockyer's (and references to other works on) "The Spectroscope." *Division III.*: Magnetism; its chief properties, and modes of measurement; Electro-Statics—

Voltaic and Thermo-Electricity, and Electro-Magnetism—Ohm's and Lentz's laws and their applications in Telegraphy and Electrolysis. *Text books*: Ferguson's "Electricity," the chapters on Electricity in Deschanel's "Natural Philosophy" and Sabine's Treatise on "The Telegraph" in Weale's Series.

To test the progress of the students in each class, *vivâ voce* examinations are held at intervals, instead of the Experimental Lectures; and written answers to questions set in each lecture are expected to be worked and brought by the students for correction at each meeting of the class. *Fee*, 5 guineas.

Physical Laboratory. — The Practical Laboratory, for physical experiments, is open daily from 10 a.m. to 1 p.m., and 2 to 5 p.m., excepting on Saturdays, when it closes at 1 p.m. *Text books*: Juniors—Balfour Stewart's "Elementary Physics," Worthington's "Practical Physics." Seniors—Kohlrausch's "Physical Measurements," Frick's "Physical Technics." *Fees*: Attendance per day weekly, £1 1s. per term. Caution money, £1 1s. Students are provided with the materials, and entrusted with the apparatus required for physical observations; for whose safety they will be responsible while the instruments continue in their charge. Injuries to the laboratory or apparatus, incurred by carelessness, will be charged to the caution money of the user, who will be held liable for the injury sustained, and the remainder, if any, of the caution money, will be returned to the student on his leaving the College. All students are expected to keep a journal of their laboratory work, which must be presented at least once a week for examination. No student neglecting to do this will be entitled to a certificate of attendance. Junior students will be required to work at least one day in the week, from 11 to 5. The Class will be divided at the beginning of each term for this purpose. The first division will attend on Tuesdays, and the second on Thursdays. The remainder of a student's attendance may be taken at such times as he prefers. Any student desiring exemption under this rule must make special application to the Professor. (*See Chemistry.*)

Chemistry.—Junior Division.—Michaelmas Term: General Principles of Chemistry—History of the Non-metallic Elements. *Epiphany Term*: History of the Metals and their more important native and artificial compounds — Principles of Qualitative Analysis. *Easter Term*: Elements of Organic Chemistry. *Text books*: Roscoe's "Chemistry," Miller's "Inorganic Chemistry," Fownes' "Chemistry." Students are expected to satisfy the Professor that they are keeping regular notes of the lectures. Students failing to do so will not be entitled to certificates. *Senior Division*: Organic Chemistry, Elements of

Applied Chemistry (including Chemical Mineralogy and Analysis). *Text books*: Roscoe's "Chemistry," Fownes' "Chemistry." *Fee*, £5 5s.

Practical Chemistry.—The Laboratory is open from 10 a.m. to 1 p.m., and from 2 to 5 p.m., except on Saturdays, when it closes at 1 p.m. A tutorial class is held at least once a week, which all laboratory students are required to attend, unless specially exempted by the Professor. *Text books*: Juniors — Owens College Junior Course, Thorpe's "Qualitative Analysis;" Seniors—Fresenius, Thorpe's "Quantitative Analysis." Students working six days per week, £5 5s. per term; alternate days, £3 3s.; one day per week, £1 1s.

Laboratory Regulations.—1. Students are required to provide themselves on entry with a regulation set of apparatus for analysis, which may be obtained on loan from the laboratory store rooms. All apparatus so obtained must be returned or replaced before the student ceases to attend. 2. Other apparatus may also be borrowed, the borrower being responsible for its safety until returned. 5. All reagents, &c., are provided by the College, with the exception of gold, silver, and platinum salts. 6. Students are required to deposit caution-money to the amount of £1 1s. on entry, which will be returned, subject to deduction to defray the expenses of any damage done in the laboratory by the student, on the bench, together with any apparatus which may have been borrowed, being delivered over.—Junior students will be required to work, at least one day in the week, between 11 and 5. The class will be divided at the beginning of each term for this purpose. The first division will attend on Tuesdays, and the second on Thursdays. The remainder of a student's attendance may be taken at such times as he prefers. Any student desiring exemption under this rule must make special application to the Professor. (*See Physics.*) Caution money in either the Physical or Chemical Laboratories is forfeited, unless claimed within one year of the bench, in respect of which it is deposited, being vacated.

Geology.—Junior Division—First Year: Physical Geology; Elementary Lithology (with demonstrations); Stratigraphical Geology and Elementary Palæontology, with special reference to the British Isles. *Senior Division—Second Year*: Palæontology (with demonstrations); Advanced Lithology (with practical work and demonstrations on Tuesday and Thursday); Mining Geology or Descriptive Geology, with special reference to the Coal-producing and Metalliferous regions of the world. Students using College microscopes will be required to pay a fee of 5s. *Books recommended*: Green's "Geology for Students," vol. i., 2nd edition; Lyell's "Student's Elements of Geology," 3rd edition; Ramsay's "Physical Geography and Geology of Great

Britain," 5th edition; Rutley's "Study of Rocks." *Fee* for either course, £5 5s. All students in geology will be expected to attend a sufficient number of Saturday field-days with the Geological Surveying Class, and will be allowed to do so without additional fee. Any such students desiring to join the Easter field-week will have to pay a fee of 10s. 6d.

Course of Geological Surveying.—This course extends over three terms. As far as possible, the instruction is given in the field, and is of such a nature as to give students a practical knowledge of elementary geological surveying and "prospecting." During the Easter vacation a whole week is given up to field-work in one of the wilder border districts; and on the report drawn up by each student of the work done during that time, a prize is awarded. *Books recommended*: A. Geikie's "Outlines of Field Geology;" Penning's "Field Geology," 2nd edit.; Lebour's "Outlines of the Geology of Northumberland." The class meets at the College every Saturday during term, at 10 a.m., for in-door work and demonstrations in blow-pipe analysis (in the Chemical Theatre), on the first Saturday in each month, for field-work on other days. Opportunity will also be afforded on wet Saturdays for blow-pipe practice by members themselves. *Fee*, for the course, £1 11s. 6d.

Natural History. — The course will treat of: 1. Elements of Human Anatomy and Physiology, viewed as presenting the highest type of Animal Life. 2. The Anatomy and Physiology of the Animal Kingdom, from the lowest form of life up to man. 3. Vegetable Organography and Physiology. *Fee*, £3 3s., or £2 12s. 6d. if the student compounds for the other classes. *Text books*: Huxley's "Elements of Physiology;" Nicholson's "Elements of Biology;" Nicholson's "Advanced Text-Book of Zoology;" Oliver's "Elements of Botany." This course is recognised by the Court of Examiners of the Royal College of Surgeons of England as satisfying their requirements in Comparative Anatomy for the Fellowship examination.

Land Surveying.—A joint course will be given during the Epiphany and Easter terms. *Fee* for the course, £2 2s.

Coal and Metal Mining.—Course of Lectures on the Theory and Practice of Coal and Metal Mining, viz.: *Michaelmas Term*: 1. Discussion of facts connected with the deposits of useful Minerals, their discovery, preliminary exploration in search of them, including different systems of boring. 2. Tools used in Mining, including Motors and Blasting. 3. The sinking of Shafts and driving of Adits and Drifts under various circumstances. The Professor of Geology gives three or four introductory lectures. *Epiphany Term*: 4. Means

of securing the various excavations by Timbering, Masonry, Tubbing, construction of Dams. 5. The different systems of working Coals and other Minerals, including Underground Haulage and Transport. 6. The principles and practice of Ventilation, and the distribution of the Air through the Workings; Safety Lamps. *Easter Term*: 7. Winding and the Drainage of Mines. 8. Washing and Dressing of Minerals. 9. Underground Surveying and Levelling. *Fee*, £3 3s. for the course (Wednesday evening). *Michaelmas Term*: Preparation for the Northumberland Certificated Managers' Examination. *Fee*, £1 1s. *Epiphany and Easter Terms*: Preparation for the Durham Certificated Managers' examination. This class is held at University College, Durham. *Fee*, £1 1s. *Books recommended*: Greenwell's "Mine Engineering"; André's "Coal Mining"; Atkinson's "Ventilation of Mines"; and Lebour's "Outlines of the Geology of Northumberland." The students attending the Wednesday Evening classes are expected to work out at home, each week, the answers to questions set by the professor, as well as to make notes of his lectures.

Political Economy.—Michaelmas Term: The subjects of the lectures in this term are—the Elements of Economic Science. The chief subjects treated of in this course are as follows: The method of investigation—the elements of production—the theoretical and practical limits to the accumulation of Wealth—the principles on which the Distribution of Wealth depends—Causes which affect the rate of remuneration of different classes—circumstances which determine the rate of interest—certain economic experiments. *Epiphany Term*: The subject of the previous term is continued, and the more difficult branches, such as the Laws of Exchange and the Theory of International Values, occupy most of the lectures. Some lectures, however, are devoted to showing how the knowledge of the principles of Economic Science may be applied to the study of History. *Text book*: Marshall's "Economics of Industry" (Macmillan and Co.). References are given to other works. These lectures are given on Monday evenings, at seven o'clock. *Fee* for each term, 10s. 6d. In the case of three or more attending from any one school or family, 5s. each. *Lent Term*: Due notice is given of the course of lectures for this term.

French.—Text books: Brachet's "Public School French Grammar," "Exercises" to the same; French Classics and "Le Théâtre Français du XIXme. Siècle;" Hall's "First French Course;" Cassell's "Complete View of the Idioms of the French Language." *Fee* for each term, 10s. 6d.

German.—Advanced students will be permitted to attend the Evening

Classes of Dr. Schünemann. *Text books*: Havet and Schrumpt's "First German Book"; Schünemann's "German Manual" (London, Williams and Norgate), "First or Second Exercise Book," and his "London Series of German Classics" (London, Simpkin, Marshall, and Co.). *Fee* for each term, 10s. 6d.

Mechanical Drawing.—Fee for each term, 10s. 6d. *Syllabus*: Practical Geometry. Plane Geometry—Construction and use of scales; construction of various polygons; delineation of the various curves; miscellaneous problems relating to lines, circles, and plane figures. Solid Geometry—Miscellaneous problems of lines and planes represented by plan and elevation, &c.; Determination from various data of the projection of solids; Intersections, Isometrical projection. *Constructional Drawing*: Detailed drawing of various examples of building construction. *Mechanical Drawing*: Detailed drawings of working parts; Drawings of Miscellaneous Machines and Engineering Structures; Working and finished drawings; Drawings from models and actual Machines.

Exhibitions, Scholarships, &c.

A few exhibitions, ranging in value from £10 to £25, are generally thrown open to competition in October amongst candidates desirous of attending the first year course of study in the College.

There are other exhibitions, of which particulars may be obtained of the Warden.

T. Y. Hall Scholarship.—This scholarship, of the yearly value of £20, tenable for three years by students attending two or more of the classes, is awarded on the result of the first examination for the Associateship in Science.

Charles Mather Scholarship.—This scholarship, of the yearly value of about £40, is awarded on the result of the Final examination for the Associateship in Science, coupled with satisfactory general conduct and attainments during the previous two years; and is tenable for one year from the time of obtaining the Associateship in Science provided the scholar continue his studies in the College to the satisfaction of the professors.

Nathaniel Clark Scholarship.—This scholarship, of the value of £15 for one year, is awarded in October to that student who shall pass the First examination for the Associateship in Science, and who shall be most distinguished in Chemistry and Geology. The scholar will be required to attend the classes of Chemistry and Geology, so as to be qualified to take those subjects for the Final examination for the Associateship in June. The successful candidate, if already an exhibitioner, may retain his exhibition.

Alder Scholarship.—This scholarship, tenable for one year, is awarded in June to that student in Natural History, of not less than three terms' standing, who passes the best examination, both of a practical and theoretical nature, in the subject of Natural History. The successful candidate will be required to pursue some special branch of Natural History while attending the lectures of the Professor of Natural History at the College of Physical Science.

Prizes.—Prizes are awarded at the end of the session to the most distinguished students in each class, according to the decisions of the respective professors.

REGULATIONS AFFECTING THE SCIENTIFIC TITLES AND DEGREES OF THE UNIVERSITY OF DURHAM.

No one shall be admitted to be a regular student of the College of Physical Science who has not passed an examination in the following subjects, viz.: Reading, Writing from Dictation, English or Latin Grammar, Arithmetic (including decimals), and Geography.

The course of study shall extend over two years at least, each of which shall contain three terms.

Students in Physical Science who shall have completed their course shall be admissible by grace of the University to the Academical Rank of Associate in Physical Science.

No grace for admission to this rank shall be granted unless the petitioner shall have passed two public examinations, to be conducted at Newcastle-upon-Tyne.

The First of these examinations shall be conducted by three or more examiners, appointed by the Council of the College of Physical Science, and shall be in the subjects appointed for students of the first year in the College of Physical Science. No student shall be admitted to this examination till he is in his third term of residence, at least, from the date of his matriculation.

The Second examination shall be conducted by three examiners at least, of whom one shall be nominated by the Warden, and the others by the Council of the College of Physical Science, and who shall be approved by Convocation; and it shall have reference to: (*a*) For Pass—(*b*) For Honours—The subjects named in the prospectus of the College of Physical Science for the examination of students at the end of their second year. No student shall be admitted to this examination till he has passed the First examination, and is in his sixth term of residence, at least, from the date of his matriculation.

All those who satisfy the examiners at either of these examinations shall be classed.

Any student in Arts, after passing the First public examination appointed for students in Arts, may, by permission of the Council, proceed as a student of Physical Science of the second year, provided he has also passed the examination appointed for students of Physical Science at the end of their first year.

Associates in Physical Science who, after their admission to this rank, have been engaged for three years, at least, in some practical work of Mechanical, Mining, or Civil Engineering approved by the Council of the College of Physical Science, and have subsequently passed a further examination having principally reference to the work in which they have been engaged, shall be admissible, by grace of the University, to the title of Mechanical, Mining or Civil Engineer of the University of Durham.

This examination shall be conducted by three examiners at least, one of whom shall be nominated by the Warden, a second by the Council of the College of Physical Science, and the third by the North of England Institute of Mining and Mechanical Engineers, and who shall be approved by Convocation.

Students who have obtained the academical rank of Associate in Physical Science shall be admissible to the degree of Bachelor of Science, provided not less than two years shall have intervened from the time of their becoming Associates, after passing an examination in not less than six of the following subjects, viz.: (1) Mathematics (pure and applied); (2) Physics; (3) Chemistry; (4) Geology; (5) Engineering; (6) Biology; (7) Either Latin or Greek; (8) Either French or German. The last two of these subjects are compulsory.

Examination Fee.—£2 2s.

Syllabus of the Subjects of the Final Examination for the Degree of B.Sc.

1. *Mathematics.*—A knowledge of the subjects required for the Final examination for the Associateship in Science being assumed, questions of a more difficult nature may be given in these, and the following extensions of the subjects be made: (1) Differential and Integral Calculus applied to the case of two or more Independent Variables; (2) the Elements of Co-ordinate Geometry of Three Dimensions; (3) Differential Equations involving only one Independent Variable; (4) the Motion of a Rigid Body.

2. *Chemistry.*—The same subjects as in the Final examination for the Associateship, viz.: (1) Principles of Chemistry, including Chemical Physics; (2) Inorganic Chemistry; (3) Organic Chemistry; (4) Applied Chemistry. Papers will be set in each of these subjects requiring a wider and more detailed knowledge than is required from candidates for the Associateship. *Practical Chemistry*: Candidates will be required to hand in their laboratory journals, duly initialed by their professor, and to submit to such further tests of their knowledge of qualitative, and the principles of quantitative, analysis as the examiners may require.

3. *Engineering.* — (1) Properties of Materials; (2) Strength and Stability of Structures designed by Civil Engineers; (3) Strength and Forms of the Elementary parts of Machinery; (4) Design of Combined Structures; (5) Design of Machinery; (6) Prime Movers.

4. *Physics.*—A knowledge of the subjects of the Final examination for the Associateship will be assumed, and questions of a more difficult nature will be set in them. Candidates will also be expected to show a knowledge of—(1) Higher Statics, Attraction, Elasticity, Capillarity; (2) Dynamics of Solid and Fluid Bodies in steady motion. The principal laws of Thermodynamics and of the Dynamical Theory of Gases, with their applications; (3) Higher Optics and Radiation; Instrumental Aberrations of Light and their corrections, Phenomena of Light in Biaxal Crystals, the Law of Exchanges; (4) Magnetic Attraction and Induction, as required for the use of Magnetometers; (5) the Laws of Electrical Action, Statical and Dynamical, as required in the measurements of Electric Forces. A satisfactory acquaintance with the use of apparatus in a Practical examination relating to the above course of subjects must be shown.

5. *Geology.*—Including the following departments: (1) *Physical Geography*, especially as connected with the operation of Geological Agents, the production of Climate, and the distribution of Vegetable and Animal Life; (2) *Mineralogy*, especially as connected with the physical properties and composition of the more abundant rock-forming Minerals; (3) *Lithology*, especially as regards the origin, relative position, structure, and texture of rocks; (4) *Descriptive Geology*, especially as regards the history and arrangement of the rock-formations of the British Islands; (5) *Palæontology*, especially as regards the nature and distribution in time of the more important orders and genera of the fossil Flora and Fauna of the British Islands; (6) *Economic Geology*, especially in its relations to Agriculture, Mining, Architecture, and the more important Arts and Manufactures.

6. *Natural History.*—(1) The candidate will have to show a detailed knowledge of the principles of Biology, and of the comparative Anatomy and Physiology of the leading groups of Animals, together with a knowledge of their development, and of their distribution in time and space; (2) the candidate will also be required to refer to its proper group any specimen of the more important divisions of Animals, recent or extinct, which may be exhibited for this purpose by the examiner, and to demonstrate its more important structural peculiarities; (3) a knowledge of Vegetable Organography and Physiology will be required.

7. *Latin or Greek.*—Candidates will be required to pass an examination in the Grammar of the language they select, and in portions of one of the following Latin authors equivalent to three books of the Æneid, or in portions of one of the following Greek authors equivalent to two books of the Iliad; the particular portions to be selected by the

University: *Latin*: Cæsar, Cicero, Horace, Juvenal, Livy, Tacitus, Terence, Virgil. *Greek*: Æschylus, Demosthenes, Euripides, Herodotus, Homer, Sophocles, Thucydides, Xenophon.

8. *French or German.*—Candidates will be required: (1) To pass an examination in the Grammar of the language they select; (2) to translate into English passages from the works of some standard French or German author, to be fixed from time to time, and also a passage from some newspaper in the selected language; (3) to translate into French or German a passage from same standard English author. Candidates for the degree of B.Sc. will be allowed to pass the examination in the Languages at the end of any year during the course for the B.Sc.

Regulations for the Degree of M.Sc.

A further degree of Master of Science will be given by the University on the following conditions: Candidates for this degree must be of not less than two years' standing from the degree of Bachelor of Science, and will be required to satisfy the examiners appointed by the Senate of the University in some branch of one of the scientific studies professed in the College of Physical Science. Candidates are required to give six months' notice of their intention to apply for examination, and of the particular branch in which they desire to be examined. A fee of £4 4s. is charged to each candidate for examination. The examination will be held simultaneously with those for the Associateship in Science and for the degree of B.Sc., and may be conducted by the same examiners. The following are the sub-divisions of the principal subjects from which the candidates may choose one for examination. Candidates will be allowed to produce evidence of any original work, either practical or theoretical, done by them in the subject in which they choose to be examined since the Degree of B.Sc.

Mathematics.—(1) Higher Trigonometry and Algebra; Theory of Algebraical Equations; the theory of Determinants, Invariants, Covariants, and modern Algebra generally; Higher parts of Differential and Integral Calculus; Calculus of Variations. (2) Definite Integrals; Laplace's and similar Functions; Differential Equations, including the methods of Separation of Symbols, and Partial Differential Equations; Calculus of Finite Differences. (3) Analytical Geometry of two and three dimensions, taking in the whole of Salmon's books on those subjects, and on the Higher Plane Curves; the Theory of Quadternions. (4) The Motion of a Rigid Body, including the Problems of Precession and Nutation, and the Tides; Physical and Geometrical Astronomy.

Experimental Physics.—(1) Mechanics and Acoustics: Elasticity

and Strength of Materials; Hydro-Mechanics, Pneumatics, and the Mechanical Properties of Sound. (2) Heat: Thermometry, Calorimetry, and the transmission of Heat; Thermodynamics; Correlations of Heat with Mechanics, Chemistry, and Electricity; and the Kinetic Theory of Gases. (3) Light: Geometrical and Physical Optics; Chemical and Electro-Magnetic Affinities of Light, and Spectrum Analysis. (4) Magnetism and Statical Electricity: The Laws of Permanent and induced Para- and Dia-Magnetization; Sources and Properties of Electricity at rest; Phenomena of the Electrical Discharge. (5) Dynamical Electricity and Electro-Dynamics: The Sources and Properties of Current Electricity; Relations to Magnetism and Mechanical Work, and to Heat, Light, and Chemical Affinity.

Chemistry.—(1) Pure Inorganic Chemistry; (2) Pure Organic Chemistry; (3) Analytical Chemistry; (4) Applied Chemistry.

Geology.—(1) Physical Geology: Astronomical relations of the Earth—General knowledge; Volcanic and Subterranean Phenomena—Metamorphism—Denudation—Glacial Phenomena; Rock-formation; Origin of lodes and veins. (2) Lithology: Lithology; Geological Mineralogy; Micro-petrography. (3) Descriptive Geology: Stratigraphy; Leading features of European Geology; Topographical Geology of Britain, or some equally well-defined region. (4) Palæontology: Flora and Fauna of the great fossiliferous formations; One important group of fossil forms. (5) Mining Geology: Physical Geology so far as relates to subterranean phenomena, and the origin of lodes and veins; Stratigraphy; Mineralogy so far as relates to Minerals used in the Arts; Geological Surveying. N.B.—In all cases the knowledge required should be up to date, thus implying familiarity with recent literature.

Natural History.—(1) Vegetable Physiology and Morphology; (2) Animal Physiology; (3) Comparative Anatomy and Systematic Zoology.

Victoria University (Manchester).

Matriculation.—University Matriculation consists in the placing of the name of a student upon the Register of Scholars of the University. Every student, on presenting himself for matriculation, is required to furnish to the Registrar of the University a certificate of his admission as a student of one of the colleges of the University; to pay a matriculation fee of £2; and to sign an undertaking to obey the regulations of the University: Provided that the conditions of studentship in any college shall have been submitted to, and accepted by, the University

Court. Students may matriculate at such times in June and in the Michaelmas term of each academic year as shall be determined by the Vice-Chancellor of the University. Names of scholars who have ceased to be students of any college of the University shall be removed from the Register of Scholars of the University by the Registrar at such periods as may be determined by the University Council, and the Registrar shall be required to obtain from the authorities of the colleges of the University, as soon as may be after the opening of each academical session, a list of such scholars of the University as may be or may have ceased to be students of each college, provided always that the name of a student, after having been removed from the Register, may be replaced by resolution of the University Council. Students presenting themselves for any of the examinations for degrees of the University are required to present certificates of having matriculated.

Faculties of Arts and of Science.—The degrees in these Faculties are Bachelor of Arts and Bachelor of Science, Master of Arts and Master of Science, together with a degree of Doctor, viz., Doctor of Literature, Doctor of Philosophy, or Doctor of Science.

Degrees of Bachelor of Arts and Bachelor of Science.—The degrees of Bachelor of Arts and Bachelor of Science are conferred upon scholars of the University who have attended in a college of the University the courses of study approved by the University, and have passed the examinations appointed by it, for the ordinary degree of Bachelor of Arts or Bachelor of Science, or for the degree of Bachelor of Arts or Bachelor of Science with Honours. Honours are granted to students who have passed through a regular course in a college of the University in one of the Honours Schools of the University. Students offering themselves for any of the examinations for the degree of Bachelor of Arts or Bachelor of Science (Preliminary, Intermediate, and Final) are required to present certificates of being at the time on the Register of Scholars of the University. Before presenting themselves for any of the examinations for the degree of Bachelor of Arts or of Bachelor of Science, students are required to furnish to the University Registrar certificates of attendance in a College of the University upon courses of instruction, approved by the University, in each of the subjects in which they are to be examined. No exemption is granted from this rule, except as hereinafter provided, and in special cases on which the University Council has received a report from the General Board of Studies. All candidates for the degrees of B.A. or B.Sc. are required to pass an examination, to be called the Preliminary examination, and to present themselves for this examination not later than two years from

the date of their matriculation, unless prevented from attending it by some cause deemed satisfactory by the General Board of Studies.

Preliminary Examination.—The times for holding the Preliminary examination are about the middle or end of June and about the beginning of October. At the Preliminary examination held in October those students only may present themselves who have matriculated since the Preliminary examination held in the previous June; or who failed in the Preliminary examination held in the previous June, or who were prevented from attending it by reasons satisfactory to the General Board of Studies. Students attending one of the courses approved by the University for one of the Honours Schools in the University, on presenting themselves for the Preliminary examination, may furnish certificates of attendance on the classes required by the University for such Honours School in lieu of certificates of attendance upon classes in any of the subjects of the Preliminary examination. Candidates presenting themselves for the Preliminary examination are required to satisfy the examiners in one of the following groups (A and B) of subjects. A.—(1) Latin; (2) Greek; (3) English Language and English History (including Geography); (4) Pure Mathematics; (5) *One* of the following—(*a*) French; (*b*) German; (*c*) Experimental Mechanics; (*d*) Elementary Chemistry. B—(1) English Language and English History (including Geography); (2) Pure Mathematics; and *either* (3) Experimental Mechanics; (4) Elementary Chemistry; (5) *One* of the following—(*a*) Latin; (*b*) Greek; (*c*) French; (*d*) German; *or* (3 and 4) *Two* of the following—(*a*) Latin; (*b*) Greek; (*c*) French; (*d*) German; (5) *One* of the following—(*a*) Experimental Mechanics; (*b*) Elementary chemistry. The names of students who have passed the Preliminary examination are published in two divisions, the names in each division being arranged in alphabetical order.

Ordinary Degrees of Bachelor of Arts and of Bachelor of Science.

General Regulations.—Candidates for the ordinary degrees of B.A and B.Sc. are, except as hereinafter provided, required to furnish certificates of having passed through, in a college of the University, a course of study approved by the University, extending over at least three academic years, corresponding to the Preliminary, the Intermediate, and the Final examinations respectively, of which years at least two shall be subsequent to the date at which they have passed the Preliminary examination. Provided that any student who shall have passed the Preliminary examination next after his matriculation, and have been placed in the First Division, may take his Degree of B.A. or of B.Sc. after two years of academical study from the date of such Prelimi-

nary examination. The examination for the ordinary degree of Bachelor (B.A. or B.Sc.) is divided into two parts, called the Intermediate and the Final examination. The times for holding the Intermediate examination are about the middle or end of June and about the beginning of October. At the Intermediate examination held in October those students only may present themselves who failed in the Intermediate examination held in the previous June, or who were prevented from attending it by reasons satisfactory to the General Board of Studies, or who present themselves in accordance with provisions stated elsewhere. Students who have failed in an Intermediate examination are required, before presenting themselves for any Intermediate examination held in a subsequent calendar year, to obtain the sanction of the General Board of Studies. Students, before entering for the Intermediate examination, are required to furnish certificates of having passed the Preliminary examination, and of having attended in a college of the University a course of study, approved by the University, and extending over at least one academic year from the date at which they have passed the Preliminary examination, in each of the subjects in the group in which they present themselves for examination. The names of students who have passed the Intermediate examination are published in a single list in two divisions, the names in each being arranged in alphabetical order. Candidates for the degree of Bachelor of Arts or of Bachelor of Science with Honours who have not been awarded Honours in the examination for the degree of Bachelor of Arts or of Bachelor of Science with Honours at which they have presented themselves, and have not in the opinion of the examiners acquitted themselves sufficiently well in such examination to be allowed to proceed to the next Final examination for the ordinary degree, shall be allowed to proceed to the next Intermediate examination in any of the groups for the ordinary degree hereinafter enumerated. The times for holding the Final examination are about the middle or end of June and about the beginning of October. At the Final examination in October only those students may present themselves who failed in the Final examination held in the previous June, or who were prevented from attending it by some cause deemed satisfactory by the General Board of Studies, or who are qualified under other provisions. Students presenting themselves for the Final examination in any of the groups for the ordinary degree hereinafter enumerated are required to have passed the Intermediate examination in such group, and to furnish certificates of having attended in a college of the University a course of study, approved by the University, and extending over at least one academic year from the date at which they have passed the Intermediate exami-

nation, in each of the subjects of the group in which they present themselves. The names of students who have pased the Final examination are published in a single list in two classes, the names in each being arranged in alphabetical order. Candidates for the degree of Bachelor of Arts or of Bachelor of Science with Honours, who have not been awarded Honours in the examination for the degree of Bachelor of Arts or of Bachelor of Science with Honours at which they have presented themselves may, if they have in the opinion of the examiners acquitted themselves sufficiently well in such examination, proceed to the next Final examination in any of the groups for the ordinary degree of Bachelor of Arts or of Bachelor of Science without being required to pass the earlier or Intermediate part of the examination for the ordinary degree.

Special Regulations for the ordinary Degree of Bachelor of Arts.—Candidates for the ordinary degree of Bachelor of Arts are required to present themselves for the Intermediate and for the Final examination in each of the subjects in one of the following groups:

A [MAINLY CLASSICAL].*

Intermediate Examination.—(1) Mathematics; (2) English Language (History of); (3) English Literature; (4) Logic. [*Intermediate course*: Greek; Latin; Ancient History; English Language; English Literature; Mathematics; Logic.]

Final Examination.—(1) Greek; (2) Latin; (3) Ancient History; (4) Philosophy. [*Final course*: Greek; Latin; Ancient History; Philosophy.]

B [MAINLY HISTORICAL].

Intermediate Examination.—(1) Latin *or* Greek; (2) Mathematics; (3) English Language (History of). [*Intermediate course*: History (Ancient and Modern); Greek; Latin; English Language; English Literature; Mathematics; French *or* German.]

Final Examination: (1) Latin *or* Greek; (2) History (Ancient and Modern); (3) French *or* German; (4) English Literature; (5) Political Economy. [*Final course*: History (Ancient and Modern); Greek *or* Latin; English Literature; Political Economy; French *or* German.]

Provided that the Classical Language presented at the Final examination has not been presented at the Intermediate examination.

C [MAINLY ENGLISH AND MODERN LANGUAGES].

Intermediate Examination.—(1) English Language (History of); (2) Mathematics; (3) Early English; (4) Ancient History. [*Intermediate course*: English Language; Early English Language; English Literature; Ancient History; French; German; Latin; Mathematics.]

* The courses inclosed in brackets are those required for the Intermediate and Final examinations in the several groups.

Final Examination.—(1) Advanced English Language; (2) English Literature (3) Modern History; (4) French; (5) German; (6) Latin. [*Final course*: Advanced English Language; English Literature; Modern History; French; German; Latin.]

D [MAINLY PHILOSOPHICAL].

Intermediate Examination.—(1) Logic; (2) Latin; (3) Mathematics; (4) English Literature. [*Intermediate course*: Logic; Greek; Latin; Mathematics; Ancient History; English Literature; French *or* German.]

Final Examination.—(1) Philosophy; (2) History of Philosophy; (3) Greek; (4) Ancient History; (5) French *or* German. [*Final course*: Philosophy; History of Philosophy; Greek; Ancient History; French *or* German.]

Candidates for the Degree of B.A. must have satisfied the examiners in Latin and Greek at the Preliminary examination.

*Special Regulations for Ordinary Degree of Bachelor of Science.**—Candidates for the ordinary degree of Bachelor of Science are required to present themselves for the Intermediate and for the Final examination in each of the subjects of one of the following groups:

A [MAINLY MATHEMATICAL].

Intermediate Examination.—(1) Pure Mathematics; (2) Applied Mathematics; (3) Physics; (4) Logic; (5) Chemistry *or* Elementary Biology; (6) *One* of the following—Latin, Greek, French, German, English Language and Literature.

Final Examination.—(1) Pure Mathematics; (2) Applied Mathematics; (3) Physics with Practical Work; (4) One of the following: (*a*) † Elementary Biology; (*b*) † Chemistry; (*c*) Philosophy; (*d*) One of the following—Latin, Greek, French, German, English Language and Literature.

B [ENGINEERING].

Intermediate Examination.—(1) Engineering with drawing; (2) Pure Mathematics; (3) Applied Mathematics *or* Physics; (4) Chemistry; (5) French *or* German.

Final Examination.—(1) Engineering with drawing; (2) Pure Mathematics; (3)‡ Any *two* of the following—Physics, Geology, Applied Mathematics.

C [EXPERIMENTAL SCIENCE].

Intermediate Examination.—(1) Pure Mathematics; (2) Physics; (3) Chemistry; (4) Any *one* of the following—(*a*) Elementary Biology; (*b*) Logic; (*c*) Physiography; (5) One of the following—Greek, Latin, French, German, English Language and Literature.

Final Examination.—(1) Applied Mathematics *or* Geology with Mineralogy; (2) Physics with Practical Work; (3) Chemistry; (4) Analytical Chemistry.

* The courses inclosed in brackets correspond in subjects to the examinations in both the Intermediate and the Final years.

† Provided the candidate has not presented this subject at his Intermediate examination.

‡ Provided that Applied Mathematics be taken at either the Intermediate or the Final examination.

D [BIOLOGICAL].

Intermediate Examination.—(1) Physics; (2) Chemistry; (3) Elementary Biology; (4) Any *one* of the following—(*a*) Pure Mathematics; (*b*) Logic; (*c*) Physiography; (5) One of the following—Greek, Latin, French, German, English Language and Literature.

Final examination.—Any three of the following*: *Division* I.: (1) Botany; (2) Zoology; (3) Physiology; (4) Geology. *Division* II.: (5) Chemistry with Practical Work; (6) Physics with Practical Work; (7) Philosophy.

Degrees of Bachelor of Arts and Bachelor of Science with Honours.

Candidates for the degree of Bachelor of Arts or Bachelor of Science with Honours are, except as hereinafter stated, required to furnish certificates of having attended in a college of the University courses of instruction, approved of by the University, and extending over not less than three academical years from the date of their Matriculation, in one of the Honours Schools of the University hereinafter enumerated. Every candidate for the degree of B.A. or B.Sc. with Honours shall be required to present himself at the examination next in date after the expiration of the third academical year from the time when he has entered upon one of the courses of instruction approved by the University for such degree; unless he shall present a medical certificate of illness satisfactory to the University Council. Candidates for the degree of Bachelor of Arts or Bachelor of Science with Honours may present themselves for examination in any of the following Honours Schools, in the respective Faculties, on furnishing certificates of having attended, in accordance with the University Regulations, the college courses required for such Honours Schools in the University, and on proving to the satisfaction of the Board of Studies that they have performed the exercises of such classes as they shall have attended for such courses, viz.:

Faculty of Arts.

I. *Classics.*—Candidates will be examined in Greek and Latin Translation and Composition; in the History, Literature and Antiquities, Grammar and Philology, of the Greek and Latin Languages; and in the History of Ancient Philosophy.

II. *English Language.*—Candidates will be examined in the English Language; in Gothic; in Icelandic *or* Old Saxon; in the Philology and History of the Teutonic Languages; and in Old French.

III. *History.*—Candidates will be examined in General History and Geography; in English (including Constitutional) History; and in selected Historical subjects.

* Provided that two of the three subjects be selected from Division I.

IV. *Philosophy.*—Candidates will be examined in Logic, Psychology, Ethics, and the History of Philosophy; and in selected Philosophical subjects.

Faculty of Science.

V. *Mathematics.*—Candidates will be examined in Pure and Mixed Mathematics.

VI. *Engineering.*—Candidates will be examined in Engineering and Pure and Mixed Mathematics.

VII. *Chemistry.*—Candidates will be examined in Inorganic and Organic Chemistry, Chemical Physics, Analytical Chemistry, in Practical Laboratory Work, and in *one* of the following optional subjects: Chemical Geology and Mineralogy, Technological Chemistry, Physiological Chemistry.

VIII. *Zoology.*—Candidates will be examined in Zoology, Comparative Anatomy, Embryology, Geology, and Palæontology; in Practical Laboratory Work; and in *either* Physiology *or* Botany.

IX. *Physiology.*—Candidates will be examined in Animal Physiology, in Practical Laboratory Work; and in *one* of the following optional subjects: Physics, Organic Chemistry, Comparative Anatomy, Psychology.

X. *Geology, Mineralogy, and Palæontology.*—Candidates will be examined *either* (*A*) in Geology, Mineralogy and Petrology, Chemical Geology, with Practical Physics or Palæontology; *or* (*B*) in Geology, Palæontology, Zoology, and Botany; and in Practical Work.

Students who have passed the Final examination for an ordinary Bachelor of Arts degree may, with the sanction of the General Board of Studies and on furnishing certificates of having attended during the academical year following such Final examination for the ordinary degree, the third, or during the two academical years following such Final examination, the second and third years' course approved by the University of any one of its Honours Schools, present themselves for examination for a B.A. degree with Honours in such school.

No candidate for a degree of Bachelor of Arts with Honours shall be admitted more than once to examination in the same Honours School; but students who have passed the Final examination in any of the Honours Schools instituted by the University shall be permitted to enter upon the third, or second and third, years' course approved by the University in any other Honours School; and, on furnishing certificates of having attended the classes in such course as have not already been attended by them in the course required for

the Honours School in which they have passed, to present themselves for Final examination in the other Honours School selected.

Provided that candidates shall not present themselves for the Final examination in the said other Honours Schools selected more than two academic years after the Final examination in Honours already passed by them, and also that no student be admitted to examination in any Honours School after a longer period than six years has elapsed since the date of his matriculation.

Names of students who have passed the examination for the degree of Bachelor with Honours shall be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

Degrees of Master of Arts and Master of Science.—The degree of Master of Arts is conferred, on payment of the proper fees, upon registered Bachelors of Arts, and on the like payment the degree of Master of Science upon registered Bachelors of Science, when of three years' standing from the date of their graduation as Bachelors, and after not less than six academic years have elapsed since the date of their matriculation. Bachelors of Arts or Science who have graduated with Honours are not required to present themselves for any further examination for the degree of Master of Arts or Science. Bachelors of Arts or Science who have obtained the ordinary degree are required further to satisfy the examiners in such portions of the examination in some Honours School of the University as the General Board may from time to time approve. The names of students who have passed the Further examination for degree of Master of Arts or Science shall be arranged in alphabetical order without distinction of classes.

Degree of Doctor of Literature, Doctor of Philosophy, and Doctor of Science.—The degrees of Doctor of Literature, Doctor of Philosophy, and Doctor of Science are conferred by the University upon registered Masters of Arts or Masters of Science of the University who shall be deemed by the Council on a report furnished by the General Board of Studies, after considering a report from one or more of its departmental boards, to have distinguished themselves by special research or learning. Provided that the General Board of Studies may, in such cases as it shall think fit, after considering a report from one or more of its departmental boards, also require candidates to pass such an examination as it may from time to time determine.

Fees to be Paid on Matriculation, and for Examinations and Degrees.—No fee entitles to admittance to more than one examination.

The fee for Matriculation is £2, and includes the fee for the Preliminary examination. £1 is payable for any subsequent Preliminary examination. The fee for the Intermediate examination is £1; for the Final examination for the ordinary B.A. or B.Sc. degree, £1; for the Final examination for the Honours B.A. or B.Sc. degree, £2. A fee of £5 is payable on the conferring of the degrees of B.A. or B.Sc., whether ordinary or with honours. £1 is payable on examination for the M.A. or M.Sc. degree. £5 is payable on the conferring of the degree of M.A. or M.Sc. £10 is payable on the conferring of the degree of Doctor.

Subjects of Examinations for the ordinary Degrees of B.A. and B.Sc.

I. *Preliminary Examination.*—A. 1. *Greek*: (*a*) One Prose and one Verse Book, selected from the following: Xenophon, Homer, Euripides; (*b*) Grammar; (*c*) Translation at sight of easy Greek passage into English. 2. *Latin*: (*a*) One Prose and One Verse Book from the following: Virgil, Ovid, Horace (Odes), Cæsar, Sallust, Livy, Cicero (easier works); (*b*) Grammar; (*c*) Translation at sight of an easy Latin passage into English; (*d*) Translation of easy sentences from English into Latin. 3. *English Language and Composition*: *English History with Geography*: (*a*) Elements of English Grammar; (*b*) Composition; (*c*) Elements of general history of the English Language; (*d*) Outlines of English History from the earliest times; (*e*) Elements of Political Geography, especially of Great Britain and Ireland. 4. *Pure Mathematics*: (*a*) Plane Geometry; Euclid, Books i.—iii., and Book vi., Props. 1—19 and 33, or the subjects thereof; (*b*) Elementary Algebra. 5. *One* of the following: (A) *French*: (*a*) Grammar;* (*b*) Translation from a French work; (*c*) Translation at sight of piece of French prose into English; (*d*) Translation of easy English passage into French. (B) *German*: (*a*) Grammar;* (*b*) Translation from a German work; (*c*) Translation at sight of easy German prose into English; (*d*) Translation of easy English sentences into German. (C) *Experimental Mechanics*: Properties of Bodies: Statics, Kinetics, and Hydrostatics, treated so as to require only elementary knowledge of Algebra and Geometry. (D) *Elementary Chemistry*: Laws of chemical combination; Chemistry of the non-metallic elements and their compounds. B. 1. *English with History* (as above); 2. *Mathematics*—(*a*) Plane Geometry—Euclid, Books i.—iii., and Book vi., Props. 1—19 and 33, or the subjects thereof; (*b*) Elementary Algebra; (*c*) Plane Trigonometry to solution of Triangles; *or* Practical Plane Geometry (straight line and circle). 3, 4, 5. *Three* of the following

* The questions in Grammar will not involve more than Accidence and Elementary Syntax.

(either *two* Sciences and *one* Language, or *one* Science and *two* Languages): (*a*) *Greek*, as in A, above; (*b*) *Latin*, as in A, above; (*c*) *French*: *a*, Grammar; *b*, Translation from a prose and from a verse work; *c*, Translation at sight of a passage of French prose into English; *d*, Translation of an English passage into French; (*d*) German—*a*, Grammar;* *b*, Translation from a prose and from a verse work; *c*, Translation at sight of easy German prose into English; *d*, Translation of an easy English passage into German; (*e*) *Experimental Mechanics*, as in A, above; (*f*) *Elementary Chemistry*, as in A above.

For Ordinary Degree of B.A.—Intermediate Examinations.—(*Groups* A, B, C, D): 1. *Greek*: (*a*) One Prose and one Verse Book selected from the following: Herodotus, Thucydides, Demosthenes (Public Orations), Xenophon, Homer, and the Tragedians; (*b*) Translation at sight from Greek into English. 2. *Latin*: (*a*) One Prose and one Verse Book selected from the following—Virgil, Horace, Cicero, Livy, Tacitus; (*b*) Translation at sight from Latin into English; (*c*) Translation of easy pieces of English into Latin prose. 3. *Mathematics*: (*a*) Elementary Solid Geometry (including Straight Lines, Planes, and Solid Angles; the simpler properties of the Parallelopiped, Prism, Cone, Cylinder, and Sphere, with the Mensuration of these Solids); (*b*) Plane Trigonometry—to solution of triangles (inclusive). 4. *English Language*: History of the English Language to or from the Norman Conquest (in alternate years). 5. *English Literature*: History of a period of English Literature. 6. *Ancient History*: Outlines of Greek and Roman History, with a selected period. 7. *Modern History*: A selected period of English History; *or*, a selected period of general Modern History or of recent English with Continental History. 8. *French*: (*a*) Accidence and Syntax; (*b*) Translation from a selected French book in verse; (*c*) Translation at sight of French prose and verse pieces into English; (*d*) Translation of English passages into French. 9. *German*: (*a*) Accidence and Syntax; (*b*) Translation from a selected German book; (*c*) Translation at sight of German passages into English; (*d*) Translation of easy English passage into German. 10. *Logic*: Deductive and Inductive Logic. 11. *Early English*: Early English prose; Sweet's Anglo-Saxon Reader, with other books selected from the prose works before the Norman Conquest, and from English writers between the Norman Conquest and the close of the 14th century.

Final Examination.—A (mainly Classical)—1. *Greek*: (*a*) One Prose and one Verse Book, selected from the following: Homer, the Trage-

* The questions in Grammar will not involve more than Accidence and Elementary Syntax.

dians, Aristophanes, Herodotus, Thucydides, the Attic Orators, Plato; (*b*) Translation at sight from Greek into English; (*c*) Translation of simple English sentences into Greek. 2. *Latin*: (*a*) One Prose and one Verse Book, selected from the following: Virgil, Horace, Cicero, Livy, Tacitus, Plautus, Terence, Juvenal; (*b*) Translation at sight from Latin into English; (*c*) Translation from English into Latin prose; 1, 2 (*d*) A paper will also be set in Greek and Latin Grammar, with the History of the Greek and Latin Languages. 3. *Philosophy*: *Mental Philosophy*: (*a*) Psychology and Ethics; (*b*) One or more prescribed books, or portions of books. 4. *History—Ancient*: Outlines of Greek and Roman History with a selected period. *B* (*mainly Historical*): 1. One of the following—*Greek or Latin*: As in *Final A*, above; omitting (*c*) in either. 2. One of the following—*French or German*. (*a*) *French*: *a*, Translation from a prescribed French book in verse or prose; *b*, Translation at sight of French prose and verse pieces into English; *c*, Translation of passages of English into French. (*b*) *German*: *a*, Translation from a prescribed German book; *b*, Translation at sight of German prose and verse passages into English; *c*, Translation of passages of English into German. 3. *Ancient History*: As in *Final A*, above. 4. *Modern History*: As in *Intermediate examinations*, above. 5. *English Literature*—A selected period of English Literature. 6 *Political Economy*: Production and Distribution of Wealth; Principles of Taxation (Adam Smith's Wealth of Nations). *C* (*mainly English and Modern Languages*): 1. *English Language*: (*a*) Early English (more especially the Poetical Literature); (*b*) Gothic—Some portion of Ulfila's Translation of the Bible. 2. *English Literature*: As in *Final B*, above. 3. *Modern History*: As in *Final B*, above. 4. *French*: As in *Final B*, above. 5. *German*: As in *Final B*, above. 6. *Latin*: As in *Final A*, above, omitting (*c*). *D* (*mainly Philosophical*): 1. *Philosophy*: As in *Final A*, above. 2. *History of Philosophy*: (*a*) General Outlines of the History of Philosophy, Ancient and Modern; (*b*) Special study of certain works, or portions of works, to be prescribed from year to year. 3. *Greek*: As in *Final A*, above, omitting (*c*) and (*d*). 4. One of the following—*French or German*: As in *Final B*, above. 5. *Ancient History*: As in *Final Examination B*, above.

For Ordinary Degree of B.Sc.—Intermediate Examination: A (*Mathematical*): 1. *Pure Mathematics*: (*a*) Elementary Solid Geometry; (*b*) Algebra, with Elements of Theory of Equations; (*c*) Plane Trigonometry—to solution of triangles. 2. *Applied Mathematics*: (*a*) Statics and Kinetics of a Particle as far as they can be taken without Differential and Integral Calculus; (*b*) Geometrical Optics. 3. *Physics*: The Laws of Energy; the chief phenomena of Sound, Heat, Light, Electri-

city, and Magnetism treated in an elementary manner. 4. *Logic*: As in *Intermediate Examination* for B.A., above. 5. One of the following—*Chemistry* or *Elementary Biology*: (*a*) *Chemistry*: Chemistry of Metals and Introduction to Organic Chemistry; (*b*) *Elementary Biology*: Elementary Physiology, Morphology, and Histology, both Animal and Vegetable. 6. One of the following: (*a*) An Ancient Language—*Greek* or *Latin*, as in *Intermediate Examination* for B.A.; (*b*) A Modern Continental Language—*French* or *German*, as in *Intermediate Examination* for B.A.; (*c*) *English Language and Literature*, as in *Intermediate Examination* for B.A.

Final Examination. — A (*Mathematics*): 1. *Pure Mathematics*: (*a*) Analytical Plane Geometry, up to General Equation of Second Degree; (*b*) Differential Calculus, and easy portions of Integral Calculus. 2. *Applied Mathematics*: (*a*) Kinematics; Statics of a Particle and a Rigid Body (exclusive of Attractions and Elasticity); (*b*) Hydrostatics; (*c*) Kinetics of a Particle and a Rigid Body (elementary). 3. *Physics, with Practical Work*: (*a*) Principles of the more important Physical Instruments; (*b*) Practical Examination in the Laboratory. 4. Any one of the following: (*a*) * *Elementary Biology*: As in *Intermediate* B.Sc., Group A, above; (*b*) * *Chemistry*: As in *Intermediate* B.Sc., Group A, above; (*c*) *Philosophy*: As in *Final* B.A., Group A, above; (*d*) Any one of the following: *An Ancient* or *a Modern Continental Language*, or *English Language and English Literature*. As in *Final* B.A., Groups A or B, above.

Intermediate Examination.—B (*Engineering*): 1. *Engineering, with Drawing*: Either of the two following combinations: (i.) (*a*) Plane Geodesy or Surveying; Levelling; Hydrography; Estimating; (*b*) Descriptive Engineering; Earthwork and Masonry; (*c*) Elementary Practical Geometry; (*d*) Linear Drawing; (ii.) (*a*) Theory of concrete forces—of simple structures—of the strength of materials; (*b*) Kinematics of Machinery; (*c*) Descriptive Engineering—Bridges, Roofs, and Machines; (*d*)† Linear Drawing. 2. *Pure Mathematics*: As in *Intermediate* B.Sc., Group A, above. 3. Either of the following: (*a*) *Applied Mathematics*: As in *Intermediate* B.Sc., Group A, above; (*b*) *Physics*: As in *Intermediate* B.Sc., Group A, above. 4. *Chemistry*: As in *Intermediate* B.Sc., Group A, above. 5*a*. *French* or 5*b*. *German*: As in *Intermediate* B.Sc., Group A, above.

Final Examination.—B (*Engineering*): 1. *Engineering, with Drawing*: Either as in *Intermediate C*, above; provided that combination i. is passed for the Final Examination when combination ii. has been passed

* Provided that the candidate has not presented this subject at his Intermediate Examination.
† A separate Paper will be set in Drawing.

for the Intermediate; and *vice versâ, or* the following combination: (*c*) Dynamics of Machinery; Hydraulics; The Steam Engine; Complex Structures; *Methods of Designing Structures and Machines; provided that combination ii. has been passed for the Intermediate Examination. 2. *Pure Mathematics*: (*a*) Analytical Plane Geometry up to General Equation of Second Degree; (*b*) Differentiation and Integration. 3. Any two of the following:† (i.) *Physics*: As in *Intermediate* B.Sc., Group A, above. (ii.) *Geology*: (*a*) Physical Structure and Classification of Rocks; (*b*) Economic Geology. (iii.) *Applied Mathematics*: As in *Intermediate* B.Sc., Group A, above.

Intermediate Examination.—C (*Experimental Science*): 1. *Pure Mathematics*: As in *Intermediate* B.Sc., Group A, above. 2. *Physics*: As in *Intermediate* B.Sc., Group A, above. 3. *Chemistry*: As in *Intermediate* B.Sc., Group A, above. 4. *Two* of the following: (i.) *Elementary Biology*—As in *Intermediate* B.Sc., Group A. above; (ii.) *Logic*—As in *Intermediate* B.A., above; (iii.) *Physiography*—(*a*) The Agents at work on and beneath the Surface of the Earth; (*b*) The Phenomena dependent on Heat; (*c*) The Distribution of Land and Water; (*d*) The Distribution of Life; (*e*) The Earth in relation to the Heavenly Bodies; (*f*) The Ancient History of the Earth. 5. Any *one* of the following: *An Ancient* or *a Modern Language*, or *English Language and Literature*, as in *Intermediate* B.A., above.

Final Examination.—C (*Experimental Science*): 1. *One* of the following: (i.) *Applied Mathematics*—As in *Intermediate* B.Sc., Group A, above; (ii.) *Geology and Mineralogy*—Geology—As in *Final* B.Sc., Group B, above; Elementary Mineralogy—The Chemical Properties and classification of Minerals—Practical Mineralogy. 2. *Physics with Practical work*: As in *Final* B.Sc., Group A, above. 3. *Chemistry*: (i.) General Organic Chemistry; (ii.) Chemical Philosophy (relation of Chemistry to Physics; Chemical Law and Theories; Development of Modern Chemistry, with outlines of History of Chemistry). 4. *Practical Chemistry*: Qualitative Analysis.

Intermediate Examination.—D (*Biology*): 1. *Physics*: As in *Intermediate* B.Sc., Group A, above. 2. *Chemistry*: As in *Intermediate* B.Sc., Group A, above. 3. *Elementary Biology*: As in *Intermediate* B.Sc., Group A, above. 4. Any *one* of the following: (i.) *Pure Mathematics*—As in *Intermediate* B.Sc., Group A, above; (ii.) *Logic*—As in *Intermediate* B.A., above; (iii.) *Physiography*—As in *Intermediate* B.Sc., Group C, above. 5. Any *one* of the following: *An Ancient* or *a Modern Conti-*

* A separate paper will be set in Drawing.

† Provided that Applied Mathematics be taken at either the Intermediate or the Final Examination.

nental Language, or *English Language and Literature*—As in *Intermediate* B.A., above.

Final Examination.—D (Biology); 1, 2, 3. Any *three* of the following: * 1. *Botany*: (*a*) Elementary tissues of Plants—Compound organs of Nutrition and Reproduction; (*b*) Vegetable Physiology; (*c*) Systematic Botany and Elements of Botanical Classification; (*d*) Laboratory Work. 2. *Zoology*: (*a*) Animal Morphology; (*b*) Elements of Embryology and of Systematic Zoology; (*c*) Laboratory Work. 3. *Physiology*: (*a*) Histology of the Animal Body; (*b*) Systematic Physiology of the Animal Body; (*c*) Laboratory work in Histology and Physiological Chemistry, with a Practical Examination on the more important instruments employed in Physiological research. 4. *Geology*: As in *Final* B.Sc., Group B, above. 5. *Chemistry*: (*a*) General Organic Chemistry; (*b*) Chemical Philosophy; (*c*) Practical Chemistry, Qualitative Analysis: As in *Final* B.Sc., Group C, above. 6. *Physics, with Practical work*: As in *Final* B.Sc., Group A, above. 7. *Philosophy*: *Mental Philosophy*—As in *Final*, Group A, above.

Acceptance of certain Examinations of the University of London.

Students of the Owens College who have passed the First B.A. or First B.Sc. examinations of the University of London in or before July, 1881, and who have presented certificates of such attendance on classes in the Owens College prior to having passed the First B.A. or First B.Sc. examinations as shall be accepted by the General Board of Studies, are permitted to proceed to any of the Final examinations for the Ordinary Degrees of B.A. or B.Sc. respectively in this University provided they have attended the final year's course required by the University for these examinations.

In the case of students of the Owens College who have passed the Matriculation examination of the University of London, such attendance on classes of the Owens College subsequent to their having passed that examination is accepted by the General Board of Studies as satisfying the requirements of the University regarding attendance in any one of the Honours Schools of the University.

OWENS COLLEGE (MANCHESTER).

Preliminary Examination.—Persons seeking admission as students must have attained the age of fourteen years, and those who are under sixteen will be required to pass a Preliminary examination in English, Arithmetic, and the Elements of Latin. The Oxford and Cambridge

* Provided that at least two of the three required subjects are chosen from among 1, 2, 3, 4, and provided that any candidate selecting Philosophy as one subject shall also present himself in Physiology.

Local examinations will be accepted in lieu of the Preliminary examination in the case of those who have passed in Honours in the prescribed subjects. Every candidate for admission will be required to produce a testimonial of good character from his last instructor, or such other testimonial as shall be satisfactory to the Principal.

Admission.—A card of admission to the several classes is issued at the office of the College, on the presentation of a certificate, signed by the Principal, and on payment of the fees. No student is entitled to attend the classes until he has complied with this regulation. Any person who is on the Register of Day Students of the College in any given session will be deemed to continue as a student unless he shall forfeit his rights in this respect by not entering his name for a succeeding session on or before the 31st October. A person who seeks to re-enter after that date will be allowed to do so only on repayment of the admission fee. A daily record is kept of the attendance of the students in the lecture rooms. Absences will be reported to the Principal, who will, at his discretion, cause the same to be notified to the parent or guardian of the defaulting student.

A *General Examination* is held at the end of the session on the results of which prizes are awarded. Examination lists, showing the position obtained by each student, are subsequently posted in the College, and printed copies thereof sent to the parents or guardians of the students. Students absenting themselves from this examination are not entitled to a certificate of attendance on the class.

The grade of Associate of the College may be obtained by students who have passed with distinction through a three years' course of study.

Residence.—A hall, licensed for residence of students, called the Friends' Hall, situated at Lloyd-street, Greenheys. Some of the professors and other officers of the College also receive students to board with them at their own houses. A Register of Lodging Houses kept by persons who are willing to conform to certain rules of discipline which have been laid down by the College, is kept in the office for the use of students seeking lodgings. Dinners and other refreshments are provided in the College Refectory daily, except on Saturdays, by the Steward, according to regulations and charges approved by the Council.

Courses of Study.—The following courses are primarily arranged to suit the requirements of the Victoria University for the ordinary and Honours Degrees in Arts and Science, but many of the classes are likewise suited to students who are preparing for the examinations of the University of London. The classes are also open to students who

do not propose to graduate in any University. The following courses correspond respectively to the Preliminary, Intermediate, and Final examinations of the University for ordinary degrees in Arts and Science, and certificates of attendance on them must be furnished by candidates on presenting themselves for these examinations, except that candidates who offer themselves for the Preliminary examination at the date of their matriculation are not required to present certificates of attendance on the first year's course.

Faculty of Arts.

ORDINARY DEGREE COURSE.—*First Year*: *Preliminary Examination Courses*:* A. Latin, higher junior; Greek, higher junior; English Language, Elementary; English History, Elementary; Pure Mathematics, Section I. *One* of the following: French, junior (*a*); German, higher junior; 1. Experimental Mechanics; Chemistry Lectures, junior. B. English Language, Elementary; English History, Elementary; Pure Mathematics, Section I. Either of the two following combinations: 1. Experimental Mechanics; Chemistry Lectures, junior. *One* of the following: Latin, higher junior; Greek, higher junior; French, junior (*a*); German, higher junior. 2. *Two* of the following: Latin, higher junior; Greek, higher junior; French, junior (*b*); German, higher junior. And *One* of the following: Experimental Mechanics; Chemistry Lectures, junior.

Second and Third Years.—Group A (mainly Classical).—Second Year (*Intermediate Examination Course*): Greek, lower senior; Latin, lower senior; Ancient History (I.); English Language, History of; English Literature; Mathematics, Part of Sect. II.; Logic (General Course). *Third Year* (*Final Examination Course*): Greek, higher senior; Latin, higher senior; Ancient History (i. or ii.); Philosophy, Mental and Moral (General Course).

Group B (mainly Historical).—Second year: Ancient History; Modern History (i.); Greek, lower senior; Latin, lower senior; English Language, History of; English Literature; Mathematics, Part of Sect. II.; *One* of the following: French, lower senior; German, lower senior. *Third year*: Ancient History; Modern History (i. or ii.); *Either* Greek, higher senior, *or* Latin, higher senior; English Literature; Political Economy; *Either* French, higher senior, or German, higher senior.

Group C (mainly English and Modern Languages).—Second year: English Language, History of; Early English (First Course); English

* Candidates for the ordinary degree of B.A. must have satisfied the Examiners in Latin and Greek at the Preliminary Examination.

Literature; Ancient History (i.); French, lower senior; German, lower senior; Latin, lower senior; Mathematics, Part of Sect. II. *Third year*: English Language, History of; Early English (second course); Gothic; English Literature; Modern History (I. or II.); French, higher senior; German, higher senior; Latin, higher senior.

Group D (*mainly Philosophical*).—*Second year*: Logic (General Course); Greek, lower senior; Latin, lower senior; Mathematics, Part of Sect. II.; Ancient History (I.); English Literature; *One* of the following—French, lower senior; German, lower senior. *Third year*: Philosophy, Mental and Moral (General Course); History of Philosophy (General Course); Greek, higher senior; Ancient History (I. or II.); *One* of the following—French, higher senior; German, higher senior.

Faculty of Science.

ORDINARY DEGREE COURSE.—*First Year.—Preliminary Examination Courses*: A. Latin, higher junior; Greek, higher junior; English Language, Elementary; English History, Elementary; Pure Mathematics, Section I.; *One* of the following—French, junior (*a*); German, higher junior; Experimental Mechanics; Chemistry Lectures, junior. B. English Language, Elementary; English History, Elementary; Pure Mathematics, Section I.; Either of the following two combinations—1. Experimental Mechanics; Chemistry Lectures, junior; *One* of the following—Latin, higher junior; Greek, higher junior; French, junior (*a*); German, lower junior. 2. *Two* of the following—Latin, higher junior; Greek, higher junior; French, junior (*b*); German, higher junior; And *one* of the following—Experimental Mechanics; Chemistry Lectures, junior.

Second and Third Years.—Group A (*mainly Mathematical*).—*Second Year* (*Intermediate Examination Course*): Pure Mathematics, Section II. or III.; Applied Mathematics, junior; Physics, Experimental; Logic; *One* of the following — Chemistry Lectures, senior; Elementary Biology, Lectures and Practical. *One* of the following—Latin, lower senior; Greek, lower senior; French, lower senior; German, higher junior; English Language, History of, *and* English Literature. *Third Year* (*Final Examination Course*): Pure Mathematics, Section IV.; Applied Mathematics, lower senior; Practical Physics, one day per week. *One* of the following—Elementary Biology, Lectures and Practical; Chemistry Lectures, senior; Philosophy. *One* of the following—Latin, higher senior; Greek, higher senior; French, higher senior; German, senior; English Language, History of, *and* English Literature.

Group B (*Engineering*).—*Second year*: Engineering, first or second

year; Mechanical Drawing; Pure Mathematics, Section II. or III.; Chemistry Lectures, senior, *One* of the following—Applied Mathematics, junior; Physics, Experimental. *One* of the following—French, lower senior; German, higher junior. *Third year*: Engineering, first, second, *or* third year; Mechanical Drawing; Pure Mathematics, part of Section IV. *Two* of the following—Physics (Experimental), Geology, Applied Mathematics, junior.*

Group C (*Experimental Science*).—*Second year*: Pure Mathematics, Section II. or III.; Physics (Experimental); Chemistry Lectures, senior: *One* of the following—Elementary Biology, Lectures and Practical; Logic (General Course); Physiography; *One* of the following—Greek, lower senior—Latin, lower senior—French, lower senior—German, higher junior—English Language, History of, *and* English Literature. *Third year*: Practical Physics, one day per week; Organic Chemistry and Chemical Philosophy; Practical Chemistry, two days per week. *One* of the following—Applied Mathematics, junior—Geology *and* Elementary Mineralogy.

Group D (*Biological*).—*Second year*: Physics, Experimental; Chemistry Lectures, senior; Elementary Biology, Lectures and Practical. *One* of the following—Pure Mathematics, Section II. or III.—Logic (General Course)—Physiography. *One* of the following—Greek, lower senior—Latin, lower senior—French, lower senior—German, higher junior—English Language, History of, *and* English Literature. *Third year*: Any three of the following†—*Branch* I.: Botany, Lectures and Practical; Zoology, Lectures and Practical; Physiology, Lectures and Practical; Geology. *Branch* II.: Organic Chemistry, Chemical Philosophy, and Practical Chemistry, two days per week; Practical Physics, one day per week; Philosophy, Mental and Moral (General Course).

Fees.—Every student is required to pay on admission an entrance fee of £1 1s. and a library fee of 5s. (except as provided below) and the fees for the classes for which he enters. As so many alternative courses are open to the student offering himself for the Victoria University examinations, it is not practicable to give tabular statements of the fees for every combination of classes. The class fees are severally stated in the syllabus of the classes.‡ Each fee, when not otherwise stated, is for the full session, or for the full course. Students who in a previous session paid a composition fee for the Regular course in Arts or Engineering will be allowed to complete

* Provided that Applied Mathematics be taken at either the Intermediate or the Final Examination.

† Provided that two of the three subjects be selected from Branch I.

‡ To be obtained of the Secretary.

their courses in the corresponding classes of this session on the old scale of composition, subject to such changes in the courses as have been found necessary. Students desiring to attend not more than two courses of lectures may, if they prefer it, pay in lieu of the admission fee, a *sessional fee* of 7s. for each class attended (other than a laboratory or other practical class), but in this case the payment of the sessional fee must be repeated for every future session. Students paying the sessional fee may at their choice obtain admittance to the use of the library on the same terms as other students.

College Courses in Engineering and Technological Chemistry.

Special prospectuses are issued for each course, and are obtainable on application at the office of the College.

Engineering Course.—Successful attendance on this course will furnish a thorough sciencific groundwork for the attainment of the knowledge requisite for the prosecution of the higher branches of the Engineering profession, but it is not intended to supersede the practical training which can only be obtained in the office of a civil, or the workshop of a mechanical, engineer. Some of the principal mechanical engineers of Manchester and the neighbourhood have signified their willingness to receive certificated engineering students of the College into their works, either as premium apprentices for a short term, or as ordinary apprentices without premiums; and to confer upon them such privileges as they may from time to time be found qualified to avail themselves of. In addition to the subjects specified in the course, students are recommended to attend, as time will allow, the following classes: Chemistry, Mineralogy, and a Modern Language. *First Year*: Pure Mathematics; Applied Mathematics *or* Experimental Mechanics; Engineering (Surveying and Estimating); Geometrical and Mechanical Drawing; Geology *or* Physics.* *Second Year*: Pure Mathematics; Applied Mathematics; Engineering (Applied Mechanics); Geometrical and Mechanical Drawing. *Third Year*: Pure Mathematics; Applied Mathematics *or* Senior Physics; Engineering (Third Year's Course); Geometrical and Mechanical Drawing. N.B.—A Class for Practical Surveying is held, which students are recommended to attend in their first and second years. The fee is £2 12s. 6d.

Certificates in Engineering will be granted by the College on the successful completion of the Engineering course. The *examinations* for certificates will include the following subjects: Mathematics (pure and applied), Geology or Physics, Chemistry, Engineering, Drawing and

* Students preparing for the profession of civil engineering are advised to select Geology, and those preparing for mechanical engineering, Physics.

Surveying. Attendance on the full course of three years is expected of candidates for the certificate, but student may obtain exemption (on cause shown) from either the first or the second year's course; students so excused will nevertheless be required to undergo examination in all the subjects specified. In the subjects of Geology, Physics, and Chemistry, a candidate who shall have been placed in a class not lower than the second in the Annual Examinations of the year in which he shall have studied such subjects will be held to have satisfied the examiners; but in the other subjects candidates will be required to satisfy the examiners at the completion of their course. The certificate will state in which subjects the candidate has gained Honours, and in which he has merely satisfied the examiners.

Technological Chemistry Course.—The complete course of instruction extends over four years, and embraces the following subjects: *First Year* (*Preparatory Course*): Chemistry Lectures, Junior and Tutorial classes; Chemical Laboratory, two days per week, and Analytical Chemistry Lectures class; Pure Mathematics, Section I.; Experimental Mechanics *or* Geology; *French *or* German; Mechanical Drawing, Practical (Evening class).

Second Year.—Chemistry Lectures, Junior,† Senior, and Tutorial classes; Chemical Laboratory, three days per week; Technological Chemistry; Experimental Physics *or* Mineralogy Lectures; German *or* French; Mechanical Drawing, Practical (Evening class).

Third Year.—Chemistry Lectures, Senior and Tutorial classes; Organic Chemistry Lectures; Chemical Philosophy; Chemical Laboratory, three days per week; Technological Chemistry; Physical Laboratory, one day per week, *or* Practical Mineralogy and Technological Mineralogy; Mechanical Drawing, Practical (Evening class).

Fourth Year. — Organic Chemistry Lectures*; Technological Chemistry; Chemical Laboratory, four days per week; Chemistry of Colouring Matters, Dyeing and Calico Printing (4th Evening Course); Mechanical Drawing, Practical (Evening class).

Certificates will be granted to students on the successful completion of this course. Attendance on the full course of four years is expected of candidates for the certificate, but students may obtain exemption (on cause shown) from the first or the first and second year's course. Students so excused will nevertheless be required to undergo examination in all the subjects specified. The certificate will state in which

*It is desirable that the student should have gained a knowledge of the elements of both these languages by the end of the second year.

†Students who gain a place in the First or Second Class in the annual examinations will be excused a second attendance on these classes.

subjects the candidate has gained Honours, and in which he has merely satisfied the examiners.

Scholarships, Prizes, &c.

Entrance Exhibitions and Scholarships. — I. *Rogers exhibition* (Classics, English, and History), value about £20. II. *Wellington exhibition* (Greek Testament), £15. III. *Dalton Mathematical exhibition*, £15. The Dalton exhibition is renewable for a second year. IV. *Grammar School scholarship*, £17 per annum, tenable for three years; open to scholars of the Manchester Grammar School only. V. *Runney scholarship*, £45 per annum, tenable for three years; awarded on the results of the May Government Science Examinations. The scholar, under certain conditions, may obtain a remission of lecture fees. VI. *Ramsbottom scholarship*, £40 per annum, tenable for two years. Open only to young men employed in the Locomotive Department of the London and North-Western Railway Co. The following scholarships are open to all persons who satisfy the conditions, whether they have or have not been previously students of the College: VII. *Shakspere scholarship* (English Language and Literature), £40 per annum, tenable for two years. VIII. *Bishop Fraser scholarship* (Greek and Roman Classics and History), £40 per annum, tenable for two years. IX. *Gilchrist scholarship*, £50 per annum, tenable for three years; awarded on the results of the Matriculation. X. *Dauntesey Medical scholarship*, value about £100. This is an entrance scholarship to the Medical School. XI. *Crace-Calvert scholarship*, £25 per annum, tenable for two years. This scholarship is only open to duly qualified members of the Evening Chemistry Classes.

Fellowships.—I. *Langton fellowship*, £150 per annum, tenable for three years. Candidates must have been students in the College for not less than three sessions, and must during their studentship or within one year after the close of the same have obtained a degree of some university of the United Kingdom, or been elected to the Associateship of the College. II. *Science and Literature fellowships*, five of £100, for one year, renewable for a second and third year. The appointments will be made, not on the results of examination, but after consideration of evidence of the qualifications of candidates. Further particulars may be obtained on application.

Scholarships.—The following (except the Shakspere and Bishop Fraser scholarships) are open to the competition of students of the College only. The regulations prescribing the terms of competition and tenure will be found in the "Calendar": I. *Victoria*

scholarship (Classics), £40 per annum, tenable for two years. II. *Wellington scholarship* (Greek Testament), £20 per annum, tenable for two years. III. *Shuttleworth scholarship* (Political Economy), £50, tenable for one year. IV. *Shakspere scholarship* (English Language and Literature), £40 per annum, tenable for two years. V. *Bradford History scholarship*, £45 per annum, tenable for one year, and renewable for a second year. VI. *Bishop Fraser scholarship* (Greek and Roman Classics and History), £40 per annum, tenable for two years. VII. *Dalton Chemical scholarships*, two, each of £50 per annum, tenable for two years. VIII. *Dalton Mathematical scholarships*, one senior and one junior scholarship, of the value of £25 each, tenable for one year. IX. *Platt Physiological scholarships*, one offered annually, £50 per annum, tenable for two years. (Two Platt Physiological exhibitions of £15 each are offered for competition at the end of the Winter Session, open to first and second years' students in Physiology.) X. *Heginbottom Physical scholarship*, £30 per annum, tenable for two years. XI. *Ashbury scholarships* (Engineering), one of £25 per annum, offered annually, tenable for two years. XII. *Dauntesey Legal scholarship*, value about £100.

Prizes.—I. *Lee Greek Testament prizes*, one of £25 and one of £12 10s. in value. II. *Classical prizes—Essay prize*, value £5. *Higher Junior Class prizes*, value £5 and £2 10s. III. *Shuttleworth History prize*, value £5. IV. *English Essay* and *Poem prizes*, each of the value of £5. V. *Early English Text Society's prizes*, a selection of the Society's publications offered to the competition of students in the Day and in the Evening classes respectively. VI. *New Shakspere Society's Book prizes*. VII. *Cobden Club Book prizes* (Political Economy). VIII. *Dalton Natural History prize*, value £15. IX. *Fairbairn Engineering prize*, value £20. X. *Engineering Essay prize*, value £5.

Department of the Evening Classes.—Short courses on nearly all the subjects included in the Day Classes are given in the evenings, between the hours of 7 and 9, during the winter months. A separate prospectus for this department may be obtained on application in July.

Solicitors' Examinations.—Students of the College who have passed the Junior Students' General examination at Owens College are exempted from the Preliminary examination before being articled; and those who have passed the Legal Students' Higher examination at Owens College may be admitted as solicitors after *four* (instead of *five*) years' service. (For further particulars see the "Calendar.")

London University Examinations.—These examinations will, with the consent of the University of London, continue to be held in Owens College until further notice, with a special view to the convenience of

students who may desire to complete their courses of study for the examinations, and for evening students of the College.

Gymnasium.—The Gymnasium has been very completely fitted with apparatus on the system of Mr. Maclaren, Director of the University Gymnasium, Oxford. The course of instruction is that set forth in Mr. Maclaren's "Physical Education," and the exercises are carefully graduated according to the ages and the physical powers of the students. Students are required to confine themselves during each lesson strictly to the exercises prescribed by the instructor. When they shall have gone through a sufficient course, they will receive certificates of competency, which will entitle them, under the direction of the instructor, to work independently of the ordinary classes. For further Rules and Regulations see the "Calendar." *Fees*: For three days a week (one hour per day) during the session, £1; two ditto, 15s.; three ditto, during a term, 10s.; two ditto, 7s. 6d. A student who takes a term ticket may, at the end of the term, exchange his ticket for a session ticket, on paying the difference in the fees.

CHAPTER II.

ENGLISH COLLEGES AND SCHOOLS.

Theological Colleges — Educating Bodies Granting Certificates: (1) *London: General Education.* (2) *London: Technical.* (3) *Provincial.*

THEOLOGICAL COLLEGES.

For full particulars concerning these, see "Guide to the Ministry."* The curricula and examinations of these bodies are recognised by the Bishops as qualifying for Holy Orders.

The chief Anglican Theological Colleges are: Salisbury, Chichester, Lincoln, St. Bees, Gloucester, St. Davids, Church Missionary Institution, Southwark Theological College, Queen's College (Birmingham), London College of Divinity, and Theological department of King's College (London). The expense and trouble of entering the Church by undergoing the curriculum of a Theological College is far less than that entailed on the student who enters at a University.

EDUCATING BODIES GRANTING CERTIFICATES. — I. LONDON — GENERAL EDUCATION.

KING'S COLLEGE, LONDON.

The course of adult education comprises the following Departments: Theological (see "Guide to the Ministry"), Department of General Literature and Science, Department of Engineering and Applied Sciences, the Medical Department (see "Guide to the Medical Profession"†), Evening Classes in Practical Art, Practical Fine Art, and the Workshop, Civil Service Department.

Residence.—Furnished rooms are provided within the College, but residence is not compulsory. The rents range from £50 to £60 per annum, or from £18 to £22 per term. In these amounts are included attendance and dinner (beer excepted) during the time that lectures continue. The academical year consists of three terms—Michaelmas, from the beginning of October to Christmas week; Lent, from the

* "Guide to the Ministry of the Chief Christian Churches in the United Kingdom." By Edwin Wooton. London: L. Upcott Gill, 170, Strand, W.C.

† "A Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

middle of January to the week before Easter; and Easter term, from Easter to the beginning of July. On joining the Department of General Literature and Science, students are examined with a view to classification. The Mathematical subjects are: Euclid, i. and ii.; Arithmetic and Elementary Algebra, including simple equations. The examination in Classics is in grammar, and in translations from standard Greek and Latin authors; also an easy passage for translation from English into Latin prose. Minimum age for admission, sixteen years.

Fees.—For matriculated students, £14 per term; in addition to which a sum of £4 15s. 6d. has to be paid for entrance fees. For particular classes:

	Per Term. £ s. d.		Per Annum. £ s. d.
Classical Literature, one course...	4 4 0		10 10 0
Two courses	6 6 0		15 15 0
Mathematics, one course.....	4 4 0		15 15 0
Two courses	6 6 0		15 15 0
Modern History.....	2 2 0		5 5 0
English Language, Composition, &c.	2 2 0		5 5 0
French	2 2 0		5 5 0
German	2 2 0		5 5 0
Drawing, Freehand and Model ...	2 2 0		5 5 0
Geometrical	2 2 0		5 5 0
Chemistry	3 3 0		8 8 0
Practical Chemistry	4 4 0		10 10 0
Geography	1 11 6		3 3 0
Mechanics, Physics	4 4 0		10 10 0
Geology	1 11 6		3 3 0
Mineralogy.....	1 11 6		3 3 0
Logic	1 11 6		3 3 0
Metaphysics	1 11 6		3 3 0
Library fee.....	10 6		1 1 0

Entrance Exhibitions.—One of £25, tenable for two years, and one of £10 for two years, awarded to the students who pass the best examinations in Classics and Mathematics respectively, provided they are under seventeen years of age on the first day of term. One *scholarship* of £50 is given annually for Modern History, and a *scholarship* of like amount for English Literature. Various *prizes* are also open to competition. Students who have pursued their studies for three years in this department are entitled to receive the diploma of Associate of King's College.

Department of Engineering and Applied Sciences.

FEES.	Per Term. £ s. d.		Per Annum. £ s. d.
Mathematics, one course.....	4 4 0		10 10 0
Two courses	6 6 0		15 15 0
Natural Philosophy	4 4 0		10 10 0

FEES (*continued*):	Per Term. £ s. d.		Per Annum. £ s. d.
Demonstrations in Physical Laboratory	1 11 6		4 4 0
Manufacturing Art and Machinery	2 2 0		5 5 0
Practical Surveying	3 3 0		8 8 0
Metallurgy:			
Lectures only	3 3 0		
Practice for one month, including the lectures	6 6 0		
Two months' ditto	11 11 0		
Three months' ditto	15 15 0		
Six months' ditto	27 6 0		
Nine months' ditto	37 16 0		

Students taking a month's ticket may attend daily during such time as the laboratory is open, or three days a week for three months.

	Per Term. £ s. d.		Per Annum. £ s. d.
Practical Fine Art:			
For two days in the week, including the lecture	3 3 0		8 8 0
Four days in the week	5 5 0		13 13 0
Six days in the week	6 6 0		15 15 0
For Ladies, on Saturdays	3 3 0		8 8 0
Workshop:			
Ten hours in the week	4 4 0		10 10 0
Six days, from 10 to 5	6 6 0		15 15 0
Experimental work in the Physical Laboratory:			
Eight hours a week	4 4 0		10 10 0
Twenty hours a week	8 8 0		21 0 0
Chemistry	3 3 0		8 8 0
Practical Chemistry	4 4 0		10 10 0
Experimental and Analytical Chemistry:			
One month's daily attendance	4 4 0		
Three ,, ,, ,,	10 10 0		
Six ,, ,, ,,	18 18 0		
Nine ,, ,, ,,	26 5 0		

A student taking a month's ticket may attend daily during one month, or three days a week during two months, or two days a week during three months.

	Per Term. £ s. d.		Per Annum. £ s. d.
Mineralogy and Geology:			
Second year	2 2 0		3 3 0
Geology, first year	1 1 0		1 11 6
Mineralogy, first year	1 1 0		1 11 6
Arts of Construction, &c.	2 12 6		7 7 0
Drawing, Geometrical Engineering, Architectural Freehand	4 4 0		10 10 0
Photgoraphy	6 5 0		13 10 0
General Library	10 6		1 1 0

Or, for all the classes, £14 per term for the first six terms, and £15 after the sixth term, together with £4 15s. 6d. for matriculation fees.

The rules as to the admission of students in this department are the same as in that of Science and Literature.

Entrance Exhibitions.—One of £20, to the student who passes the best Entrance examination. *One* of £25, tenable for two years, is given annually to the first-year student who most distinguishes himself in the regular examinations. Various prizes are given, and *exhibitions* other than those mentioned awarded from time to time. Students of this Department are, after three years' study, entitled to the diploma of Associate.

Evening Classes.

Evening Classes are held during the months from October to March inclusive, and during the months of April, May, and October. The following are the subjects of the winter course: Divinity, Elementary Greek Testament, Latin, Greek, Ancient History, French Language, German Language, English Language and Literature, English History, Italian, Spanish, Geography, Arithmetic, Writing, Mathematics, Commerce and Commercial Law, Elements of Chemistry, Practical Chemistry, Mechanics, Physiology, Botany, Experimental and Applied Physics, Mineralogy, Geology, Comparative Anatomy and Zoology, Logic, Political Economy, Public Reading and Speaking, Law, Law Society's Examinations, Harmony, Vocal Music, Practical Fine Art, Metallurgy, Practical Metallurgy, Shorthand, Theological Classes, Workshop Classes.

Fees for the Winter Session.—For any single course (except Divinity, Practical Chemistry, Applied Physics, Practical Metallurgy), £1 11s. 6d. The Divinity Class is free to all students attending any other class, and 10s. 6d. each when no other class is attended. For Practical Chemistry, Applied Physics, and Practical Metallurgy, £2 2s. each. Every non-matriculated student also pays 3s. in the winter session towards the expenses of keeping up the College Library. For any four classes, £5 5s.; for five classes, £6 11s. 3d.; with 10s. 6d. extra for each class, if Practical Chemistry, Applied Physics, or Practical Metallurgy are included. After Christmas, the fee is £1 1s. for one class, except in the case of Practical Chemistry, Applied Physics, and Practical Metallurgy, which are £1 11s. 6d. Four classes are charged £3 10s., with 10s. 6d. extra for each class, if Practical Chemistry, Applied Physics, or Practical Metallurgy are taken. Students of this Department who are attending at least two classes may become "Matriculated Students of King's College, London," by payment of an additional fee of £2 12s.

Two *scholarships* of £20 each, tenable for two years; two *exhibitions* of £10 each, tenable for one year, and two prizes of £10 each, are given annually for proficiency in four of the scientific courses of lectures in this department.

School of Practical Art.

The divisions are: (1) Elementary; (2) Advanced; (3) Practical Application of Art and Design, *e.g.*, drawing on wood, stone, copper, engraving, drawing and painting on porcelain, modelling, designing wall and furniture decoration, &c.

Fees.—£2 12s. 6d. for the year, payable in advance. Tickets for single terms, £1 1s. each.

UNIVERSITY COLLEGE, LONDON.

Terms.—The session is divided into three terms, as follows: First term, from the beginning of October to the middle of December; second term, from beginning of January until the middle of March; third term, from middle of March to middle of June. Students are admitted without previous examination to any class or classes they may wish to attend. All the classes in both Arts, Science and Laws, are open to both men and women. Fees are to be paid in advance. Class examinations are held at the end of every session. University Hall, adjoining the College, is designed for the residence of the students (not compulsory).

Prizes, &c.—Andrews prizes: 1. *For new students*: Three prizes of £20 each will be awarded annually upon examination as follows: One for Classics, free for any two of the three subjects, Mathematics Physics, Chemistry; one for three languages—(*a*) English, (*b*) either Latin or Greek, (*c*) French, or German, or Italian. 2. *Prizes for students of one year's standing*: At the end of each session, two prizes of £30, and one prize of £20. 3. *For students of two years' standing*: At the end of each session, one prize of £50, and one of £40:

No student is eligible to receive an Andrews prize who was more than eighteen years of age on the 1st of October in the year in which such student first entered the College Classes.

Jew's Commemoration scholarship, £15 a year, tenable for two years. *Malden Medal and scholarship*: For Greek and General Arts proficiency, open to third year's men. The *Clothworkers' Company's exhibitions*: Two of £50 each, tenable for two years, given for proficiency in the same subjects as the Malden. The *Tuffnell scholarships*: One of £100, tenable for two years, may be awarded annually, alternately for distinction in Analytical and Practical Chemistry. *Mayer de Rothschild exhibition*, value £50, awarded for Pure Mathematics. The *Hollier scholarships*, one for Greek and one for Hebrew, of £60 value each, and tenable for one year. The *Fielden scholarships*, in German and French: One of £15, one of £10, and one of £25, given at the close of

each session. The *Heiman silver medal*, for German. The *West scholarship*, of £30, tenable for one year, for English. The *Ricardo scholarship*, of £20, tenable for three years, for Political Economy. The *Joseph Hume scholarships*: One of £20, tenable for three years, for Jurisprudence, and one of £20, tenable three years, for Political Economy. Two *Slade scholarships*, in Fine Arts, of £50 value, tenable for three years, may be annually awarded. The *Morris Bursary*, of £25, tenable for two years, is open to sons of deceased indigent professional men. Candidates must be not over twenty years of age. The *Gilchrist Engineering scholarships*, two of £35, tenable two years, awarded on entrance. Other exhibitions are awarded from time to time.

FEES.

	For One Term. £ s. d.		For the Session. £ s. d.
Latin:			
For Matriculation	2 2 0		
For Second and Third Terms together, £3 13s. 6d.			
For First B.A. Pass Examination	2 12 6		6 6 0
For First B.A. Honours and Second B.A. Pass and Honours	3 3 0		7 7 0
Translation at Sight	1 11 6		3 3 0
Combination fee for First B.A. Pass and Honours and Second B.A. Pass and Honours	5 5 0		11 11 0
Greek:			
For Matriculation	2 2 0		
For Second and Third Terms together, £3 13s. 6d.			
For First B.A. Pass	2 12 6		6 6 0
Professional Lectures (Books)	3 3 0		7 7 0
Composition in Prose and Verse	1 11 6		3 3 0
Translation at Sight	1 11 6		3 3 0
Archæology:			
For the first or second term	1 1 0		2 12 6
For the third term	1 11 6		
Sanskrit:			
Junior Class	2 2 0		5 5 0
Senior Class	2 2 0		5 5 0
Hebrew	1 11 6		4 4 0
Hebrew Literature, £3 3s.			
Arabic Language and Literature, £6 6s. each class.			
Persian, £6 6s. each class.			
Chinese	2 2 0		5 5 0
English Language and Literature:			
For one lecture a week	1 1 0		3 3 0
Two lectures a week	2 2 0		5 5 0
For each additional lecture a week	0 10 6		1 1 0
Perpetual to all the English lectures, £12 12s.			
For the Exercise Classes	1 1 0		2 2 0
French Language, History, and Literature	2 12 6		6 6 0
German Language and Literature	2 12 6		6 6 0
Italian	2 12 6		6 6 0

ARTS (*continued*):	First Course. £ s. d.		Second Course. £ s. d.
Ancient and Modern History	1 1 0		1 11 6
For both courses, £2 2s.			
	For One Term.		For the Session.
Philosophy of Mind and Logic	—		6 6 0
For the 1st or 2nd term, £3 3s.; for the 3rd term, £2 2s.			
History of Philosophy	—		1 1 0
Fee for both courses, £10 10s.			
Political Economy	1 11 6		2 2 0
Mathematics:			
Lower Junior Class	2 12 6		6 6 0
Junior Classes	4 4 0		10 10 0
Senior Classes	4 4 0		10 10 0
Geometrical Course Sections, £1 11s. 6d.			
Higher Senior Class	3 3 0		8 8 0
Applied Mathematics and Mechanics	3 3 0		7 7 0
Graphical Statics, Mensuration, and Projective Geometry	3 3 0		7 7 0
Higher Dynamics and Mathematical Physics	4 4 0		10 10 0
Practical Mathematics	2 2 0		4 4 0
Geometrical drawing	2 12 6		6 6 0
Physics—Matriculation Class	2 2 0		5 5 0
Junior Class:			
For the Lectures, two terms, £3 13s. 6d.; for one term, £2 2s.			
For the Exercise Class, for the session, £2 12s. 6d.; for one term, £1 1s.			
Experimental Physics:			
For the Lectures	2 12 6		6 6 0
Exercise Class	1 1 0		2 2 0
Practical Courses:			
Qualitative course	2 2 0		5 5 0
Quantitative course	2 2 0		5 5 0
Senior Class	3 13 6		9 9 0
Physical Laboratory	—		22 1 0
Six months	17 17 0		
Three months	10 10 0		
One month	4 4 0		

CHEMISTRY.—General course: For the course, £7 7s.; perpetual, £9 9s.; for the half course, £4 4s.; for the organic course alone, £2 2s.; for the Exercise Class, £2 2s.

ANALYTICAL AND PRACTICAL CHEMISTRY.—For the session, 25 guineas; six months, £18 18s.; three months, £10 10s.; one month, £4 4s.; summer practical course (junior), £5 5s.; for a second course, £3 3s. Senior, as for the junior. Summer matriculation course in Chemistry (practical), £4 4s.; Elementary Chemistry (Women's class), for matriculation, £4 4s.; Chemical Laboratory—For the session, £26 5s; six months, £18 18s.; three months, £10 10s.; one month, £4 4s.

GEOLOGY AND MINERALOGY.—There are three distinct courses; the fee for the whole is £8 8s.

BOTANY.—For the practical class, £4 4s.; for the junior class, £2 2s.; for the elementary course, £2 12s. 6d.

ZOOLOGY AND COMPARATIVE ANATOMY.—*General course*: For the course, £6 6s.; Perpetual, £8 8s. *Practical courses*: (1) Summer class, £4 4s.; (2) Advanced class, £4 4s.; (3) Laboratory work, per month, two days a week, £2 2s.; three days a week, £3 3s.; every day, £4 4s.

Elementary Biology, £7 12s.; Physiology, £10 10s.; Practical, £8 8s.; Embryology, £5 5s.; Advanced course of Practical Physiology, £3 3s.; Hygiene and Public Health, £2 2s.

LAW CLASSES.—Roman Law, £11 11s. Constitutional Law and English Law: Either course, £6 6s.; for a term, £2 12s. 6d. Constitutional History of England: £1 11s. 6d. for the course; £1 1s. for the term. Jurisprudence: For the session, £6 6s.; for a term, £2 12s. 6d. Architecture and Construction: Architecture as a Fine Art, £6 6s. the course; Architecture as a Science, £6 6s. the course; Women's Class on Architectural Art, £1 1s.; the Practice of Architecture, £3 13s. 6d.

ENGINEERING AND PRACTICAL TECHNOLOGY.—Junior class, £7 7s. for the course; for a term, £3 3s.; for two terms, £5 5s. Senior class—For the course, £7 7s.; for a single term, £3 3s.; for two terms, £5 5s. Mechanical Technology (in two courses)—For each course, £1 11s. 6d.; for the two, £2 12s. 6d. Engineering Drawing—For the session, £6 6s.; for a single term, £2 12s. 6d. Surveying and Levelling—For the course, £5 5s.; for lectures and field work alone, £4 4s. Engineering Laboratory—For the session, £21; six months, £16 16s.; three months, £10 10s.; one month, £4 4s. For three days a week the fees are—£12 12s., £9 9s., £6 6s., and £2 12s. 6d. respectively. Work Room—For the session, £4 4s.; for a term, £1 11s. 6d.

GEOLOGY.—For the course, £2 2s. Chemical Technology—For each course of lectures, £2 2s.; for the four courses, £5 5s. The courses are—(*a*) Chemistry of the Alkali Trade; (*b*) Soap, Glass, Pottery, Cements; (*c*) Chemistry of Brewing; (*d*) Agricultural Chemistry. Other courses are taken up from time to time—*e.g.*, Analytical Chemistry, Dyeing, and Metallurgy.

DEPARTMENT OF THE FINE ARTS.—Drawing and Painting Class: For the general course, £19 10s. the session; for each term, £7 7s. Lectures on Anatomy, £1 11s. the course. Lectures on Perspective—Free to students who have entered for the whole session of the general course; fee for other students, £1 1s.

MANCHESTER NEW COLLEGE (*University Hall, Gordon-square*).

The College is in connection with the University of London and University College, London. The Course of Study extends over five or six years; namely, two or three undergraduate, succeeded by three Theological years. The student who desires to pass through the whole course in the College is required to matriculate in the University of London, having selected Greek as one of his optional subjects, before entrance; and not later than the end of the third year to take the

degree of B.A. in the same University, so as to bring an undivided interest to the studies of his Theological period. Candidates will be required to give satisfactory evidence of their ability to write clear grammatical English, and to read aloud distinctly, naturally, and with correct pronunciation.

It is recommended that candidates for Matriculation in the University of London, intending subsequently to enter Manchester New College, should choose German rather than French, as a subject of examination, on account of the superior usefulness of that language to the future studies of the theologian.

In particular cases, with the special sanction of the Committee, students may be admitted to some of the Theological and Philosophical lectures without entering on the entire course.

When candidates are admitted as Divinity students, it is with the distinct understanding that they will go through the whole College course; and that their quitting the College at an earlier period, for the purpose of undertaking any congregational charge, or for any other object, cannot be sanctioned by the Trustees.

Students who have taken a degree in Arts, at any English, Scotch, or Irish University, may be admitted to the three years' Theological Course without further examination, except that they will be required to show that they can read aloud, to the satisfaction of the Professors. The acquirement, before entrance on the Theological Course, of a competent knowledge of German, and of a sufficient acquaintance with the rudiments of Hebrew, is strongly recommended.

Students who have exhibited aptitude for the Ministry, being not less than twenty-one years of age, and not having graduated in any university, may be admitted to the three years' Theological Course, provided that—They satisfy the Professors, or other examiners especially appointed by the College, of their ability to enter on the Theological Course with advantage; and pass an examination in the following subjects: In *Greek*, four books of Homer, and two books of the Cyropædia, or of the Anabasis of Xenophon; in *Latin*, four books of Virgil and two books of the Odes of Horace; either the Catilinarian Conspiracy, or the Jugurthine War, of Sallust; and either an Oration or the two Treatises, De Senectute and De Amicitiâ, of Cicero; in *Mathematics*, Arithmetic, as far as vulgar and decimal fractions (inclusive); Algebra, as far as quadratic equations (inclusive); and Geometry, the first six books of Euclid. They will also be examined in some text-book of Logic, and be required to render at sight a passage of German into English, and any passage of the Gospels from the Greek.

Scholarships.—To assist undergraduate students who wish to enter upon the Theological Course, after graduation at some British or Irish University, the Trustees of Manchester New College offer not more than *two scholarships* yearly, of the annual value of £50 each. In the case of these scholarships, the usage of the College with regard to receipts by a student from charitable or trust funds will be suspended. Candidates for the scholarships are to produce the certificates, and to pass the examination above specified. It is a condition of these scholarships that each scholar shall acquire, before presenting himself for admission to the College for three Theological years, a sufficient knowledge of Hebrew to enable him to pass an examination in the book of Genesis to the satisfaction of the Professors. Scholars residing in London will be required to attend the course of instruction in Hebrew provided by the College. At the time of receiving the scholarships, the scholars are to furnish a written statement that it is their intention to enter Manchester New College as Divinity students after graduation. If more than two candidates present themselves in any one year, the scholarships will be given, after a competitive examination, to the students who acquit themselves most satisfactorily. Each scholarship will be tenable for one or two years, as arranged by the Trustees or Committee, but not for any longer period, unless with the special permission of the Trustees, and in every case a scholarship shall lapse when the scholar enters on the Theological Course of the College. If any scholar shall reside for the purposes of study in London, he will be required to subject himself to the discipline of the College as fully as if he were an ordinary undergraduate student of the institution. The scholarships will be payable half-yearly in advance; but in every case the payment of the second year's instalment will depend upon the receipt from the student of a report of his studies and standing in his University, and the production of a satisfactory certificate of diligence and good conduct. The examination for the scholarships will take place in the month of April or May in each year.

Fees.—The Classes of Manchester New College are open to any one on payment of the following fees: Mental and Ethical Philosophy courses, each, per session, £3 3s.; Religious Philosophy, £3 3s.; Ecclesiastical History courses, each, £3 3s.; Introduction to Study of Theology, £1 11s. 6d.; New Testament, Introduction, £3 3s.; New Testament, Translation and Exegesis, £3 3s.; History of Doctrine, £3 3s.; Greek and Latin Reading courses, each, £2 2s.; History of Religion of Israel (four lectures weekly), £5 5s.; Hebrew, £3 3s.; Comparative Religion, £3 3s. Students on their own foundation, full fee, £10 10s.

The Ainsworth Scholarship.—The Committee offer to those students of the College who shall obtain a Gold Medal in the M.A. examination at London University a scholarship of £100. Competitors for this scholarship must graduate as students of Manchester New College, either on taking their Bachelor's or Master's degree. If the former, they must have previously spent not less than two years at Manchester New College; if the latter, not less than one year. The Ainsworth scholarship is open to any lay student of University College who has previously enrolled himself as a student of Manchester New College, gone through his undergraduate course under the direction of the Principal of that College, and attended the Classes for Religious and Ethical Instruction which it provides for its lay students. Subject to these limitations, the scholarship is open to every gold medallist at the examinations for the Master's degree in any one of the branches of Classics, Science, or Philosophy. Payment will be made to successful competitors in two yearly payments of £50. The scholarship will be continued until notice to the contrary is given. Two years' notice will be given previous to its withdrawal. Further particulars respecting the scholarship, and the plans of study at Manchester New College, may be obtained on application to one of the Secretaries.

Royal College of Preceptors.

Established in 1846, and incorporated by Royal Charter in 1849. The diplomas granted by the College are of three grades—Associate, Licentiate, and Fellow.

The qualifications required for the grade of Associate are somewhat higher than those required by the Committee of Council for certificated teachers of the first class, and those for the grades of Licentiate and Fellow correspond as nearly as possible to those required for an ordinary degree and for an Honour degree in Arts, respectively, at the principal Universities of Great Britain and Ireland. A distinctive feature of these examinations is that in all cases the Theory and Practice of Education is an obligatory subject for each grade.

The Science and Art of Education is dealt with by the College as a special subject of instruction, and there is in operation a course of lectures and lessons in this subject extending over one year.

The annual subscription to the College is £1 1s.; a single payment of £10 10s. confers the privilege of life membership.

The Membership.—Candidates must be over eighteen years of age, and must have passed one of the undermentioned examinations, or in its place the examination for the diploma of Associate, excepting from it the Theory and Practice of Education:

(*a*) Matriculation and all higher examinations in any home or colonial university.
(*b*) Examinations for diplomas at foreign universities.
(*c*) Foreign State examinations for licences to teach.
(*d*) The Senior Local examinations held by the Universities of Great Britain.
(*e*) The examinations for first class certificates of the College of Preceptors.
(*f*) The examinations recognised by the General Medical Council as exempting candidates from the preliminary Literary examinations of the various Medical corporations.
(*g*) The examinations held by the Committee of Council on Education for Government certificates.

Diploma of Associate.—Subjects of examination: (1) The English Language, with outlines of English Literature; (2) English History; (3) Geography, Political, Physical, Mathematical; (4) Arithmetic; (5) The Theory and Practice of Education; (6) One of the following: (*a*) Classics, or a modern foreign language; (*b*) Mathematics; (*c*) Science.

Diploma of Licentiate.—Subjects of examination: Subjects 1, 2, 3, 4, as for the Associateship; (5) The Theory and Practice of Education; (6) Two of the following: (*a*) Classics; (*b*) Two Modern Foreign Languages; (*c*) Mathematics; (*d*) Science. Candidates who have already passed for the Associateship in the first four subjects need not be re-examined in these, but subject 5 must be again passed.

Diploma of Fellow.—Subjects of examination: Subjects 1, 2, 3, 4, as for the Licence. Candidates who have already passed in these subjects for the lower diplomas need not be re-examined. (5) Theory and Practice of Education (compulsory); (6) Three of the following: (*a*) Classics; (*b*) Mathematics; (*c*) Two Modern Foreign Languages; (*d*) Science.

Fees.—Associateship, £1 1s. for each examination for which the candidate is entered; and £1 1s. when the diploma is granted. Licentiateship, £1 1s. for each examination for which the candidate is entered; and £2 2s. when the diploma is granted. Fellowship, £1 1s. for each examination for which the candidate is entered; and £5 5s. when the diploma is granted.

London Society for the Extension of University Teaching.

This institution was formed to provide the means of higher education for persons not frequenting University courses of instruction. Lectures are delivered at certain centres throughout the metropolis; the headquarters of the Society is at 22, Albemarle-street, W.

Birkbeck Literary and Scientific Institution (*Southampton-buildings, Chancery-lane*).

At this institution lectures are given on, and classes are established in the chief branches of education. The library contains 9,000 volumes, and is open to members. There is a reading room supplied with the chief periodicals, and a magazine room and study supplied with the principal magazines, scientific and otherwise.

Subscriptions to the institution, including admission to classes at reduced fees, free admission to lectures, entertainments, and reading room, and free use of the library:

Gentlemen.	s.	d.	Ladies.	s.	d.
Annual	18	0	Annual	12	0
Half-yearly	10	0	Half-yearly	7	0
Quarterly	6	0	Quarterly	4	0

The annual subscription, after two consecutive years' payments, is reduced to 15s. for gentlemen, and 10s. 6d. for ladies.

The Educational Council holds examinations and awards *prizes* and *certificates* of three grades. It also confers the title of Associate of the Institution. The following *honours* are in addition offered for competition: Two *scholarships*, the first of £10 10s., with free admission to the institution for one year; and the second of £3 3s.; the *Committee prize* of £5 5s. for languages; the *Ravenscroft prizes* of £5 5s. for Organic and Inorganic Chemistry, £5 5s. for Theoretical and Applied Mechanics, £5 5s. for Art, £5 5s. for English History and Geography, £5 5s. for English Grammar and Literature, £5 5s. for Arithmetic, £5 5s. for Mental Arithmetic, £5 5s. for Book-keeping, £5 5s. for an Essay on Domestic Economy, and £5 5s. for Spelling; the *Wilson prizes* of the value of £8 for Physics; the *Birkbeck prizes* of £3 3s. for Mathematics, £3 3s. for Natural Science, £3 3s. for Applied Science, and £3 3s. for Moral and Mental Science; the *Houston prizes* of £3 3s. for Botany, and £3 3s. for Agriculture; the *Dunman prizes* of £5 5s. for Animal Physiology; the *Henken prize* of £3 3s. for Word Definitions; the *Medwyansyky Essay prize* of £3; the *Chester prize* of £2 for Political Economy; the *Special prize* of £2; and the *Henken prize* of £1 1s. for the Theory of Music; the *English Essay prize* of £2; the *Special prize* of £1 1s. for Public Speaking, and the *Mason prize* of £1 1s. for Sketching from Nature, in addition to other prizes, which are from time to time announced.

London Institution.

This is an association formed for the diffusion of useful knowledge, &c. It is incorporated by Royal Charter.

Terms for Subscribers.—Two guineas for personal admission for one year from any date to the use of the circulating library, reading rooms, and writing room; or, with personal admission to all the lectures, two and a-half guineas.

Membership is open to ladies as well as to gentlemen.

Lectures are given in Science, Art, and Literature, and amongst the lecturers are some of the first professors of the day.

The *circulating library* contains 70,000 vols. The institution is also in connection with Messrs. W. H. Smith and Son, Mr. Rolandi (foreign literature), Mr. Lewis (science), and Messrs. Augener (music), so as to supply orders for works not in its own collection, or of which more than its own number of copies may be required to meet current demands.

Each subscriber is allowed to take out 10 vols. at a time.

Subscribers may have their books sent them, carriage paid, through the London Parcels Delivery Company on prepayment to the institution of 10s. a year. On prepayment of a further 10s. a year they may also send back parcels of books through the same company's carmen (not receiving offices), the institution paying carriage when received.

There are about 170 publications supplied to the library for the perusal of the members.

There is a writing room, furnished with stationery, directories, copying press, &c.

Address—Finsbury Circus, E.C.

THE LONDON ORGAN SCHOOL AND INTERNATIONAL COLLEGE OF MUSIC (3, *Princes-street, Cavendish-square*).

A course of 12 *private lessons* in any one of the following subjects: Organ, Piano, Harmonium, Harmony, Counterpoint, Composition, Improvisation, Orchestration, Singing, Violin, Violoncello, Harp, Flute, &c., French, German, or Italian languages, £2 2s. per course.

Two subjects.—Piano (private lessons) and Harmony in class, £3 3s.; Piano (private lessons) and singing in class, £3 3s.; Organ (private lessons) and Harmony or Singing in class, £3 3s.

Three subjects.—£4 4s. and £5 5s., according to arrangement.

Pupils taking lessons in other subjects whose engagements or business prevent their attending the Harmony or Sight Singing Class are allowed to take short lessons in Harmony or Sight Singing on payment of £1 1s. Pianoforte pupils receive instruction in Organ Playing without extra charge.

Payment commences from date of entrance.

Arrangements have been made for classifying the students, holding quarterly examinations, and granting prizes, medals, and certificates of ability.

Pupils are prepared for the Oxford and Cambridge Local examinations, both in Music and Languages, for the examinations of the

Society of Arts, the College of Preceptors, the College of Organists, and Council on Education; also for the Oxford, Cambridge, and Dublin Mus. B. and Mus. D. examinations.

There are several *scholarships* open to competition, entitling the successful candidates to instruction in one or more subjects on payment of half the usual fees.

New College, London.

Classes are held in Mathematics and Natural Philosophy, Hebrew and German Languages; Logic; Mental and Moral Philosophy; Greek and Latin Languages; English Language and Literature; Chemistry; Elocution.

Candidates are prepared for the examinations for degrees in Arts and Laws of the University of London, and the instruction given by the College is formally recognised by the University.

Fees for Lay Students.—College Matriculation fee, £2; or fee for one session for two or more classes, £1; fee for one session for one class, 10s. Class fees for each session: Greek and Latin Languages, each class, £5; Mathematics and Natural Philosophy, each class, £5; Chemistry, £2; English Language and Literature, Logic, Mental and Moral Philosophy, each class, £3; German, each class, £3; Hebrew, £3.

II.—London—Technical.

Science and Art Department, South Kensington.

An examination is held annually, about May, in the following subjects: 1. Practical, Plane and Solid Geometry; 2. Machine Construction and Drawing; 3. Building Construction; 4. Naval Architecture and Drawing; 5. Pure Mathematics; 6. Theoretical Mechanics; 7. Applied Mechanics; 8. Sound, Light, and Heat; 9. Magnetism and Electricity; 10. Inorganic Chemistry (Practical); 11. Organic Chemistry (Theoretical); 11p. Organic Chemistry (Practical); 12. Geology; 13. Mineralogy; 14. Animal Physiology; 15. Elementary Botany; 16 and 17. Biology, including Animal and Vegetable Morphology and Physiology; 18. Principles of Mining; 19. Metallurgy; 20. Navigation; 21. Nautical Astronomy; 22. Steam; 23. Physiography; 24. Principles of Agriculture.

Each subject is subdivided into three stages or courses—The Elementary, the Advanced, and Honours, except Mathematics, which is subdivided into seven stages, with Honours in three groups or stages. A candidate may offer himself in any or all of the above subjects. The examination is held throughout the kingdom at certain local centres. Cards recording their success in the examination are given to all

successful candidates. *Queen's prizes*, consisting of books or instruments, chosen from lists furnished for that purpose, are given to all candidates who obtain a First Class in the elementary or in the advanced stage of a subject or in either of the seven stages of Mathematics. Provided that—(1) The candidate is a student in a school or class recognised by the Department; (2) If he have been examined in the advanced stage, that he has previously passed in the elementary stage (or in Mathematics in one of the first three stages). There are some other conditions, but these do not affect the general mass of candidates. *Bronze medals* are given to all who obtain a First Class in Honours. Persons not students in recognised science classes may enter at any local centre for the departmental examination; provided that—(1) An examination is to be held in the subject or subjects they select; and (2) they give notice before the 25th of March in each year of their intention to the local committee at such centre. The *fee* is 2s. 6d. The examinations are conducted by means of printed papers.

Candidates who pass in the Advanced or Honours stage are qualified to become science teachers in classes preparing for the Departmental examinations.

The examinations in the three stages of a subject, or, in Mathematics, in a group of stages, are held at the same time, a separate series of questions being given in each stage. The elementary and advanced stages are for the general students of the Science Classes. The Honours examination is of a much more advanced character. In each stage there are two grades of success—first and second class. For the second or lower class of the elementary stage, the standard of attainment required is only such as will justify the examiner in reporting that the instruction has been sound, and that the students have benefited by it; but the standard may be raised from year to year.

For further information see the "Science Directory," price 6d., to be had from the South Kensington Science and Art Department.

Royal Academy Schools.

All applicants for admission to these schools must give proof of proficiency in either Drawing or Modelling, and, except in the case of Architects, of such acquaintance with the Anatomy of the Human Frame as is comprised in a knowledge of the skeleton, and the names and uses of the external layer of muscles.

Painters must produce a drawing in chalk from the antique. Also drawings of a figure anatomised. Sculptors must produce a model either in the round or relief from the antique, and a drawing of the same. They must also show drawings of a figure anatomised.

Prior to preparing such specimens candidates should obtain the "Regulations" from the Secretary. All applications for admission must be made on printed forms furnished for that purpose. If admitted, the student will become a probationer for two months. Should his work at the end of this period meet with approbation he will be admitted a student for three years. At the end of the three years, subject to certain conditions and the passing of an examination, the student will be admitted for a further period of three years.

Architects are required to produce as a specimen of ability a plan. elevation, and section (which may be copies of published drawings or engravings) of an existing building; an original perspective sketch in pencil of an existing building; and a drawing of a piece of original sculpture. A candidate should apply for admission on the forms issued for that purpose. If successful he will become a probationer for six months, at the expiration of which time, should his work in the Academy meet with approbation, he will be admitted a student for three years At the end of the three years the student, subject to the fulfilment of certain conditions, will be admitted for a further period of three years. All instruction in the Academy is gratuitous, the student providing his own materials. The period of studentship is limited to six years, and cannot be renewed.

Trinity College, London.

This institution has not been granted a charter, it is incorporated as a joint stock company,

The *Academical Division* consists of two departments: 1. Classes and Lectures; 2. Public Examinations.

Classes and Lectures.—The scheme includes every subject connected with the Science and Art of Music, viz., Choir Management, Harmony, Counterpoint, Musical Composition, Vocal Music, Organ (with opportunities for practice), Pianoforte, Orchestral Instruments, Vocal and Instrumental Practice, &c., and General Subjects, viz., Classics, Mathematics, Modern Languages, English Literature, Science, &c. Some *Free scholarships* have been established; also gold and silver medals, as well as other prizes for diligence and progress in study.

Resident students are received upon conditions named in the "Calendar."

The *Examinations for Diplomas in Music* are held twice a year, and are open to persons of either sex, whether students of the College or not.

The *Special Certificates* are designed to meet the needs of those who, unable to enter for the Professional diplomas of the College, desire to

obtain credit for technical knowledge of any special subject. The subjects are: (1) Harmony; (2) Counterpoint; (3) Instrumentation; (4) Solo Singing; (5) Pianoforte; (6) Organ; and (7) Violin, Violoncello, or any other orchestral instrument approved by the Academical Board. Candidates may enter for one or more subjects at the same examination.

Local Examinations in Elementary Musical Knowledge are held in all parts of the United Kingdom and the Colonies, at centres placed under the care of local secretaries. There are National prizes, honour certificates, and pass certificates. Applications for the appointment of local centres should be made, in the first instance, to the Secretary.

Local Examinations in Instrumental and Vocal Music may be arranged through the Local Secretaries. The examiner appointed by the Academical Board may visit an examination centre at any time.

Institutions in Union.—Any institution, college, school, choir, or society may, subject to the approval of the Academical Board, be enrolled in union with the College, on the election of the principal or secretary as an honorary member. Institutions in union, amongst other privileges, may enter their members for all the local examinations at reduced fees. Applications for enrolment should be directed to the Hon. Local Secretary of the centre in which the institution is situate, or, if there be no centre, to the Secretary.

Honorary Membership of the College is obtainable by election, and on payment of an annual subscription of £1 1s. Honorary members have free access to the College Library; the privilege of competing for scholarships and prizes; the Calendar and College Journal (monthly), gratis; free enrolment of an institution in union; the electoral privilege of the College Senate; right of attendance at the usual public meetings of the College. *House Members* have in addition (on payment of a further annual subscription of £1 1s.) the free use of the reading rooms of the College, &c.

The *New College House*, containing largely increased accommodation for hon. members and students, is situate in Mandeville-place, Manchester-square (corner of Hinde-street), and is easily accessible from all parts of London, being within a few minutes' walk of Oxford-circus, and of the Baker-street Station of the Metropolitan Railway, which communicates with all the suburban lines.

The "Trinity College Calendar," containing detailed information respecting the above, may be obtained of the College Bookseller, Mr. Reeves, 185, Fleet-street, E.C., price 3s. 6d., by post 4s.

Fees.—Per term: Harmony, Counterpoint, &c., Form, Orchestration, £1 5s. each; Organ, Harmonium, Violoncello, £2 10s. each; Piano-

forte, Solo Singing, Violin, from £2 10s. each; Flute, Oboe, Clarionet, Harp, Extemporaneous Playing, Figured Bass Playing, £3 3s. each; Acoustics, Musical History, £1 1s. each; Ensemble Pianoforte Playing, Physiology of the Throat and Ear, Choral Service Class for Clergy, £2 2s. each; Choral Society, 7s. 6d.; Orchestral Society Choir Class for Boys, 10s. 6d.; Elements of Music, 5s.

The following classes are also held: Latin, Greek, French, German, Italian, Mathematics, History, English Literature, Botany and Zoology, Mental Science, Elocution, Physiology and Public Health, Political Economy, Matriculation Course.

Fees.—For each of the foregoing subjects, £1 1s., except the Matriculation course, the fee for which is £2 2s.

There are evening and day classes. Students may enter for a single study.

Each term is of twelve weeks' duration, and there are three terms in the year.

Royal Agricultural Society of England.

Subjects for Senior Examination.—Practical Agriculture, Book-keeping by Double Entry, General Chemistry, Agricultural Chemistry, Comparative Anatomy, Physiology, Botany, Geology, Mensuration and Surveying, Mechanics and Natural Philosophy.

The examinations are conducted by means of written papers, and by a *viva voce* examination, at which any member of the society may be present. Every candidate will be required to satisfy the examiners in the Science (Chemistry) and Practice of Agriculture, and in Book-keeping; and also in one of the two following subjects—Land Surveying and Mechanics, as applied to agriculture. The successful candidates will be placed in two classes, and arranged in order of merit. Candidates, in order to be placed in the First class, must satisfy the examiners in both Land Surveying and Mechanics, as applied to Agriculture. Any candidate may offer himself for examination in one or more of the following subjects, viz.: Botany, Geology, or Anatomy. Any knowledge which he may show of these subjects will be counted to his credit in the general classification, provided that he shall have fulfilled the foregoing conditions, and provided that the knowledge of these subjects does not fall below the standard fixed as a minimum in each of these *optional* subjects. Each candidate obtaining a First class certificate will thereby become a life member of the Society.

The following *prizes* will be awarded to candidates placed in the first class for aggregate merit: *First prize*, £25; *second prize*, £15; *third prize*, £10; *fourth prize*, £5. *Certificates*, to be termed First and

Second-class certificates, will be granted to candidates placed in the First and second class; such certificates will specify the subjects in which the candidates shall have satisfied the examiners.

Crystal Palace Company's School of Art, Science, and Literature.

School of Gardening and Practical Floriculture.

The *course* extends throughout two years, and embraces: (1) Landscape Gardening; and (2) Practical Gardening and Floriculture. *Fee* for first year's course, £60; for second year's course, £60; for the two years' course, £110.

Courses of instruction are also given in Practical Gardening and Floriculture apart from their application to Landscape Gardening. The course extends throughout one year. The *premium* is £30.

School of Practical Engineering.

This school was established with the purpose of affording to students of Civil or of Mechanical Engineering the advantage of thorough practical instruction in the rudiments of either branch of the profession and in the manipulation of materials. The leading object is to prepare students, by systematic practical instruction, for professional articles, so that, on entering an engineer's office or works, the pupil may at once be useful to his principal, and enabled to take advantage of the opportunities for learning open to him because he has mastered the elementary details of the profession.

The school is also available for students already articled who desire instruction in either the offices or shops; for gentlemen anxious to become engineering draughtsmen, or to compete for the Whitworth scholarships, or to enter the steam mercantile marine, or to fit themselves by practical knowledge of scientific and mechanical work and expedients for life in the Colonies or abroad, as explorers or settlers, especially when they may be entirely dependent on their own resources.

Candidates for admission are required to pass a Preliminary examination in the rudiments of Arithmetic, Algebra, and Geometry, the Mechanical Powers, the Composition and Resolution of Forces, and the Elements of Mechanical Drawing. Candidates may be prepared for this examination. *Fee* for such instruction, £15 per term. The minimum age for admission is 15.

The year is divided into three terms of fifteen weeks each. The Mechanical course is comprised in one year's premium, £52 10s.; for additional terms, £17 10s. each. The course in Civil Engineering

extends throughout one year; a student may, but need not before entering this division, pass through the Mechanical course. In any case, he must pass an Entrance examination in Mechanical Drawing, Arithmetic, Algebra and Trigonometry. Premium, £63; for additional terms, £21 each. *Fee* for the two years' course (combining the Mechanical Engineering and Civil Engineering schools), £105. At the expiration of each term examinations are held and certificates of proficiency granted.

Colonial Section.

This section is designed for gentlemen who are going to the Colonies or abroad as explorers or settlers. The object proposed is to afford them so much practical knowledge of scientific and mechanical work and expedients as shall enable them best to utilise the means at their disposal, especially when entirely dependent on their own resources. Premium for one year's instruction, £52 10s.; for additional terms, £17 10s. each.

Ladies' Division.

The school was established to utilise the valuable courts and collections of the Crystal Palace for the purposes of instruction in Art, Science, and Literature. The studies and instruction rooms are strictly private. The school is a centre for both the University of Oxford and the University of Cambridge Local Examinations, the Oxford Examination for Women, and for the Cambridge Higher Local Examination. The senior opens on October 1st and closes July 31st.

Regulations for the Vice-Chancellor's Certificate (*Univ. Cambridge*).—1. For the purpose of this certificate the subjects of lectures can be classified in three groups: (*a*) Including the branches Literature, Language, Political Economy, History, Logic; (*b*) Including the branches Political Economy, History, Logic, Moral Science; (*c*) Including the branches Natural Science and Logic. 2. At the end of each course of lectures and classes terminal certificates of attendance and examination will be given under the authority of the Syndicate to all who have (1) satisfactorily attended the lectures and classes, and (2) passed the examination. The certificates will specify the subject and duration of the course and the distinction (if any) which the student has gained in the examination and in the class work during the course. 3. Any student who obtains terminal certificates for courses extending over a period of at least six terms in subjects all of which belong to the same group, the certificates covering at least two terms in each branch which the student selects, will, on presentation of these certificates to the Syndicate, become entitled to receive a certificate signed by the Vice-Chancellor of the University, stating that the student has passed

through a course of study approved by the Syndicate, and signifying the courses attended and the distinctions (if any) which have been gained. 4. The Syndicate reserve to themselves the right of altering these regulations from time to time, or of rescinding them, and of requiring satisfactory evidence of sufficient elementary knowledge on the part of the pupils, and also of charging such a capitation fee as they may from time to time deem advisable.

Fees.—A reduction of ten per cent. is made when students pay in advance for the whole session, or thirty-six weeks, for those subjects marked thus *: * Water Colour Painting, £3 3s. for twelve lessons—* from the figure, £3 3s.; a charge of 5s. is made for twelve sittings from living model; * Drawing from the Antique, £3 3s. for twenty-four lessons; * from the life, £4 4s. for twenty-four lessons; * Modelling in Clay —Sculpture in Marble, £3 3s. for twelve lessons; * Painting in Oils (from the life, &c.), £3 3s. for twelve lessons; * Painting in Oils (animals), £3 3s. for twelve lessons; Animals from life, £4 4s. for twelve lessons; English Literature, £1 1s. for twelve lectures and classes; English Philology—composition, £1 1s.; * French language and literature, * German language, * Italian language, * Greek, * Latin, £2 2s. each for twelve lessons; General History, English History, £1 1s. each for twelve lectures and classes; Geography, Physical, National, £2 2s. for twelve lectures; Astronomy, Physiology, each, £1 1s. for twelve lectures and classes; * Arithmetic, Mathematics, and Algebra, £2 2s. for twelve lessons in either subject; Pianoforte Ensemble Playing, £2 2s. for twelve lessons; Pianoforte with stringed instruments, twelve lessons, the two sections—first, £3 13s. 6d.—second, £4 14s. 6d. Pianoforte (private lessons): Wednesday, thirty minutes, £6 6s. for eight lessons; Thursday, twenty minutes, £6 6s. for twelve lessons; Tuesday and Friday, thirty minutes, £4 4s. for twelve lessons; Wednesday, forty-five minutes, £4 4s. for twelve lessons; Pianoforte (first grade), £2 2s. for twelve lessons, forty-five minutes. Classical Chamber Music, £6 6s. for twelve meetings, sixty minutes. Organ (private lessons), £4 14s. 6d. for twelve lessons; * Harmony and Musical Analysis, £2 2s. for twelve lessons; Composition (private lessons), £4 4s. for twelve lessons, thirty minutes; Sight Singing, Reading at Sight and Solfeggi, £1 10s. for twelve lessons; Singing (private lessons), £6 6s. for twelve lessons, thirty minutes; £6 6s. for six lessons, sixty minutes. Dancing—Wednesday, 11 a.m. and 2.30 p.m.*; Friday, £3 3s. for ten lessons; Tuesday, £2 2s. for ten lessons; * Decorative Painting and Design—* Artistic Woodcarving, £3 3s. for twelve lessons; * Art Pottery Painting, £3 3s. for twelve lessons. The following *scholarships* are awarded annually: In Art,

one of £30; in Modern Languages, &c., one of £25; in Music, one of £40.

National Art Training School (*South Kensington*).

The courses of instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of Art and in the knowledge of its scientific principles, with a view to qualifying them as Bachelors of Schools of Art competent to develop the application of Art to the common uses of life, and to the requirements of trade and manufactures.

The instruction comprehends the following subjects: Freehand, Architectural and Mechanical Drawing; Practical Geometry and Perspective; Painting in Oil, Tempera and Water Colours; Modelling, Moulding, and Casting. The classes for Drawing, Painting, and Modelling include Architectural and other Ornaments, Flowers, Objects of Still Life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. These courses of instruction are open to the public. The classes for male and female students meet separately.

Fees.—For classes studying five whole days per week, including evenings, £5 for five months, and an entrance fee of 10s. *Evening classes*: Male school, £2 per term; female school, £1 per term—three evenings per week in each case. Schoolmasters, school mistresses, and pupil teachers of public elementary schools may attend on any two evenings in each week; fee, 5s. for the term. Governesses in private schools or families may attend the day classes for not more than three months on payment of £1 per month, without entrance fee. An evening Artisan Class is held in the elementary room; fees, 10s. per term, or 3s. per month. Students of this class may pass into the general class rooms at the same fee when they have passed examinations in the four subjects of second grade drawing. Students may attend a special Architectural class, which is held on Tuesdays; fee, £1 1s. per term of five months, and an entrance fee of 10s. The students can be admitted to these classes until they have passed an examination in Freehand Drawing of the second grade. Examinations of candidates for admission will be held weekly at the commencement of each term, and at frequent intervals throughout the year. These examinations are held at the school on Tuesdays at 11.45 a.m. and 6.45 p.m., except in the months of May, June, and July, when they take place at 5.45 p.m. The examination fees are 2s. 6d. for day students, and 6d. for evening students, to be paid at the time of examination. Unsuccessful candidates cannot be re-examined until after a month's

interval. Candidates who have already passed an examination in second-grade Freehand Drawing are admitted on application to the Registrar without further examination.

The *annual session* consists of two terms, each lasting five months, commencing on the 1st March and the 1st October, and ending on the last day of July and the last day of February respectively. Students who have passed the required examination may join the school at any time during the session on payment of fees for not less than five months; and those who have paid fees for five months may remain until the end of the session on payment of a professional fee for each month unexpired up to 31st July. The months of August and September being the vacation, are not counted as part of the five months paid for. One week at Christmas and one week at Easter or Whitsuntide are also vacations. The school is open for study every week day, except Saturday, at 9 a.m. The evening classes for male students are open daily from 7 to 9 p.m., except during the months of May, June, and July, when they meet from 6 to 8 p.m. The evening classes for female students meet on Tuesdays, Thursdays, and Fridays from 6.30 to 8.30 p.m., except from May 1st to July 31st, when the hours are the same as in the male school—from 6 to 8 p.m. Students properly qualified have full access to the collections of the Museum and Library, either for consultation or copying, as well as to all the school lectures of the department. Masters and students in the National Art Training School and other Schools of Art under the Department who are desirous of studying in the galleries in foreign countries, and who have obtained one or more certificates of the third grade, may receive, on application to the Secretary, a form of recommendation as to their competence, which may be presented with their certificate to the British Consul or to the directors of the galleries in question.

A course of twelve *lectures on Anatomy* as applicable to the Arts is given in each term. The spring course may be attended by ladies. *Fee* for the course, 6s.; for a single lecture, 1s. A course of *lectures* on *the Historical Development of Ornamental Art* is given each year. The public is admitted on payment of 15s. for the complete annual course, 10s. for the course of 20 lectures each term, or 1s. each lecture. Metropolitan District Schools of Art are now established at the following places:

1. The Female School of Art, 43, Queen-square, Bloomsbury.
2. Blackheath, Lee, and Lewisham, Bennett Park.
3. Blackheath Hill, 13, Lansdowne-place.
4. Chiswick, Bath-road, Bedford Park.

5. City and Spitalfields, Primrose-street.
6. Islington, 21, Cross-street.
7. Lambeth, Miller's-lane, Upper Kennington-lane.
8. North London, Sandringham-road, Kingsland.
9. St. Martin's-in-the-Fields, Castle-street, Long Acre.
10. St. Thomas, Charterhouse, Goswell-road.
11. Stratford, Maryland Point.
12. West London, 155, Great Titchfield-street.
13. Westminster, Royal Architectural Museum.

There are *female classes* and *evening classes* at most of these schools. At Lambeth there are classes for Pottery, Painting, and Wood Engraving.

There is an annual *examination for prizes* in all Schools of Art, and a national competition. South Kensington Museum and the Bethnal Green branch are open free on Mondays, Tuesdays, and Saturdays. The students' days are Wednesdays, Thursdays, and Fridays. The Art Library at South Kensington is open during the same hours as the Museum. It contains about 45,000 volumes and pamphlets on all subjects bearing on art, a collection of about 17,000 drawings, designs, and illuminations; about 60,000 engravings, chiefly of ornaments; and about 45,000 photographs of architecture, objects of art, original drawings, &c. All its contents are rendered as far as possible available to students at the Schools of Art and general readers. Tickets of admission to the Museum, including the Art Library and educational reading room, and the Branch Museum, Bethnal Green, are issued at the following rates: Weekly, 6d.; monthly, 1s. 6d.; quarterly, 3s.; half yearly, 6s.; yearly, 10s. Yearly tickets are also issued to any school at £1, which will admit all the pupils of such schools on all students' days, to be obtained at the catalogue sale stall at the Museum. The South Kensington Museum, as a storehouse for the United Kingdom, lends books and objects to all Schools of Art in connection with the Science and Art Department.

Such Schools of Art are at present established at: Aberdeen, Andover, Barnsley, Barnstaple, Barrow-in-Furness, Bath, Bedford, Belfast, Berwick-on-Tweed, Bideford, Birkenhead and branch, Birmingham, with six branch schools, Bolton, Boston, Bournemouth, Bradford (Ch. Inst.), Bradford (Grammar School), Bradford (Mechanics' Inst.), Bridport, Brighton, Bristol, Bromley, Bromsgrove, Burnley, Burslem, Burton-upon-Trent, Cambridge, Cardiff, Carlisle, Carmarthen, Carnarvon Cheltenham, Chester, Chesterfield, Cirencester, Clonmel, Coalbrookdale, Cork, Coventry, Croydon, Darlington, Derby, Devizes, Devonport, Dollor, Doncaster, Dorchester, Dover, Dublin (Metropolitan), Dublin

(Queen's Institute), Dudley, Dumfries, Dundee, Durham, Edinburgh (male), Edinburgh (female), Elgin, Exeter, Falkirk, Farnham, Frome, Glasgow (Haldane Academy), Glasgow (Buchanan Institute), Gloucester, Gosport, Halifax, Hanley, Hartlepool (West), Hastings and St. Leonards, Hertford, Huddersfield, Hull, Ilkley, Inverness, Ipswich, Keighley, Kendal, Keswick, Kidderminster, Kilmarnock, Lancaster, Leamington, Leeds, Leicester, Leicester (Wyggeston's Hospital), Lewes, Limerick, Lincoln, Liskeard, Liverpool (North District), Liverpool (South District), Londonderry, Macclesfield, Manchester (Royal Institution), Manchester (Grammar School), Manchester (Mechanics, Institute), Manchester (Longsight), Mansfield (Metropolitan Schools), Blackheath (Bennett Park), Blackheath (Lansdowne Place), Bloomsbury (female), Chiswick, City and Spitalfields, Islington, Lambeth, North London, St. Martin's, St. Thomas (Charterhouse), South Kensington, Stratford, West London, Westminster Royal Architectural Museum, Middlesboro', Morpeth, Newcastle-under-Lyme, Newcastle-upon-Tyne (Fitzroy-place), Newcastle-upon-Tyne (Corporation-street), Newcastle-upon-Tyne (Mechanics' Institution), Newport (Mon.), Northampton, Norwich, Nottingham, Oxford, Penzance, Perth, Plymouth (9, York-street), Plymouth (Y.M.C.A.), Poole, Portsmouth, Preston, Reading, Redditch, Rotherham, Ryde, Salisbury, Selby, Sheffield, Shipley, Shrewsbury, Sleaford, Southampton (Hartley Institution), Southampton (Philharmonic Hall), South Shields, Stafford, Stirling, Stoke-upon-Trent, Stourbridge, Stroud, Sunderland, Swansea, Taunton, Tavistock, Torquay, Trowbridge, Truro, Wakefield, Walsall (Station-street), Warminster, Warrington, Waterford, Watford, Weymouth, Winchester, Wolverhampton, Worcester, Yarmouth (Great), York (Munster Yard), York (Low Ousegate).

Royal Institution of Great Britain.

This institution was established under a charter granted by George III., and has been enlarged and confirmed by Act of Parliament. It is an association of individuals who are attached to science, and desirous to promote its advancement. Its chief objects are: 1. To promote Scientific and Literary Research; 2. To teach the principles of Inductive and Experimental Science; 3. To exhibit the application of these principles to the various Arts of life; 4. To afford opportunities for study.

The Royal Institution comprises: 1. Two laboratories for the promotion of Chemical and Physical Science by experiments and original investigations. 2. Public lectures, intended to supply that which books or private instruction can rarely afford—Experimental illustration

and detailed descriptions of matters connected with science or art. They usually comprehend a short course at Christmas, and six or more courses before and after Easter; the season lasting from the middle of January to the middle of June. The subjects of these lectures are generally some of the different branches of inductive science, as Mechanics, Chemistry, Heat, Light, Electricity, Astronomy, Geology, Botany, and Physiology. Courses are also occasionally given on subjects of general interest, as on Literature, the Fine Arts, and Music. 3. Weekly meetings of the members of the Institution. The object of these meetings is to bring together men of science and literature, and to afford opportunities of communicating by discourses in the theatre either new views or new applications of known truths, and of demonstrating by experiment, and familiarising by description, new results which have been recently recorded in the scientific memoirs of Philosophical Societies. 4. A model room, containing scientific apparatus of historical interest and of present use. The chief object of this collection is to furnish apparatus for research and illustrations for the lectures, &c. 5. A library of about 43,000 vols., including works of science, the Transactions of various British and Foreign Societies, Historical, Topographical, Antiquarian, and Art Works. 6. A reading room for study, well supplied with journals and scientific works. 7. A newspaper room, in which the principal journals, magazines, and reviews, English and foreign, are regularly provided. A circulating library is subscribed to, in order to afford the members an opportunity of seeing the newest books as soon as published.

Terms of Admission.—Persons desirous of becoming members should apply to the Secretary. Candidates when proposed by four members are immediately admitted to all the privileges of the institution. They pay on election £10 10s. (£5 5s. as an admission fee, and £5 5s. as the first annual payment), or £63 in lieu of all payments. Members are admitted to all lectures delivered in the institution, to the libraries, and to the weekly evening meetings; they have the right of voting at the monthly meetings; they may also introduce by ticket two friends to each of the weekly evening meetings, as long as there is room, and their families have the privilege of attending the lectures at a reduced charge; and for every additional subscription of £21 at one time, or £3 3s. per annum, each member is entitled to introduce personally, or by a written order, one visitor to each of the public lectures. Annual subscribers to the institution pay £5 5s., and £1 1s. as an admission fee. They are admitted to all the courses of lectures delivered in the theatre of the institution, to the libraries, and to the newspaper rooms, but have not the privilege of attending the evening meetings.

Admission to Lectures.—The wives of members, and sons and daughters (under the age of twenty-one) of members are admitted for the season to all courses of lectures, on the payment each of £1 1s., and to any separate course on the payment each of 10s. 6d.

PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (5A, *Pall Mall East, S.W.*).

The Society consists of ordinary and honorary members.

The admission fee for ordinary members is £1 1s., and the annual subscription £1 1s. Members may compound for their future annual subscriptions by the payment of £10 10s. in addition to the admission fee. Persons residing abroad and desirous of becoming members pay no more than the admission fee and first contribution. Every candidate for admission into the Society must be proposed by two or more members, who must sign a certificate in recommendation of him; one of such members must have a personal knowledge of the candidate. Ladies are eligible as members. Honorary members are elected by the Council.

MUSICAL ASSOCIATION (27, *Harley-street, Cavendish-square, W.*).

Established for the investigation and discussion of subjects connected with the art and science of Music. The annual subscription is £1 1s. Life composition fee, £10 10s. The Association consists of practical and theoretical musicians, as well as those whose researches have been directed to the science of acoustics, the history of the art, or other kindred subjects. Every candidate for admission into the Society must be proposed by two members.

SANITARY INSTITUTE OF GREAT BRITAIN.

The Institute examines and grants *certificates of competence* to local surveyors and inspectors of nuisances, and to persons desirous of becoming such or of obtaining the certificate. The examinations are usually held in June and November. A board of examiners is appointed by the Council, consisting of gentlemen representing medical, chemical, and sanitary science, engineering, architecture, and sanitary jurisprudence. The examination for local surveyors includes a competent knowledge of the statutes relating to sanitary authorities, of sanitary science and construction, and of engineering. The examination for inspectors of nuisances comprises the elements of Sanitary Science, together with Sanitary Construction, and the Statutes relating to the preventing of disease and the suppression of nuisances injurious to health. Fees are

charged for the examinations, and a certificate of competence, signed by the examiners, is granted to successful candidates, entitling them to be designated as "Certificated by the Sanitary Institute of Great Britain."

A *congress* for the consideration of subjects relating to Hygiene, and an exhibition of sanitary apparatus and appliances are held annually by the Institute. Fellows, members, associates, and subscribers of the Institute have the right of free admission to the meetings, addresses, and conversazione in connection with the Congress, and to the exhibition.

Members are elected by ballot. They must be recommended by at least three fellows or members of the Society. The admission fee payable by a member is £3 3s., and the annual subscription £2 2s. Medical officers of health and medical men holding certificates in sanitary science from any university or medical corporation are entitled to be enrolled as members of the Institute without payment of the admission fee. Members desirous of becoming life members may do so on payment of £10 10s. in lieu of the annual subscription. All persons who have passed the examination and received the certificate for local surveyor from the Institute by virtue of having so passed become life members of the Institute upon the further payment of £5 5s. *Associates*, whose privileges are only inferior to those of members as regards holding office on the Council or electing its members, and some minor matters, pay an admission fee of £2 2s. and an annual subscription of £1 1s. All persons who have passed the examination and received the certificate for Inspectors of Nuisances from the Institute, by virtue of having so passed, become Life Associates of the Institute upon the further payment of £3 3s.

The Royal School of Mines (*South Kensington and Jermyn-street*) and the Normal School of Science.

The Normal School of Science at South Kensington is intended primarily for the instruction of teachers and of students of the industrial classes selected by competition in the examinations of the Science and Art Department.

The Royal School of Mines is affiliated to the Normal School. Students entering for the Associateship of the School of Mines obtain their general scientific training in the Normal School. Other students are admitted, so far as there may be accommodation for them, on the payment of fees sufficiently high to prevent undue competition with institutions which do not receive that aid. The instruction in the

Normal School is arranged in such a manner as to give the students a thorough training in the general principles of science, followed by advanced instruction in one or more special branches. The Associateship is granted in certain divisions or lines of study. Students who go through any one of the prescribed courses of instruction and pass the necessary examinations receive a certificate of Associateship of the Normal School or of the Royal School of Mines. But students who are not candidates for the Associateship are permitted to take up the course of instruction in one or more special branches of science, and on passing the examination receive a certificate to that effect.

The *Associateship* of the Normal School of Science is given in one or more of the following divisions: (*a*) Mechanics; (*b*) Physics; (*c*) Chemistry; (*d*) Biology); (*e*) Geology; (*f*) Agriculture. And the *Associateship* of the Royal School of Mines in: (*g*) Metallurgy; (*h*) Mining. The session is divided into two terms. The first term begins about the 1st October, and ends about the middle of February. The second term begins in the middle of February and ends about the middle of June. The curriculum is of three years' duration. The course of instruction is the same for all the divisions during the first two years, after which it is specialised into the "lines" of study mentioned above.

The *subjects* common to all divisions are: *First year*: Chemistry (part 1), Mechanics (part 1), Mathematics, Practical Geometry, and Mechanical Drawing. *Second year*: Physics (part 1), Geology (part 1), including Mineralogy, Elements of Astronomy.

	FEES.							
	Part 1.		Part 2.		Part 3.		Part 4.	
	Lecs.	Lab.	Lecs. and Lab.		Lecs. and Lab.		Lecs. and Lab.	
	£	£	£		£		£	
Chemistry	5	16	18		18		—	
Physics	5	12	16		16		—	
Biology with Botany	4	8	8		4		8	
Geology with Mineralogy	4	8	12		—		—	
Mechanics	4	6	10		10		—	
Metallurgy	2	16	18		—		—	
Assaying, for Mining Students	—	12	—		—		—	
Mining	4	12	—		—		—	
Agriculture	4	10	—		—		—	
Astronomy	3	—	—		—		—	

Mathematics, £3 per term; Practical Geometry and Mechanical Drawing, £3 per term; Freehand Drawing, £1 per term. Thus, the fees for the first two years amount to £75, and for the remainder of the course for the Associateship they vary from £30 to £40. Students who do not wish to attend the lectures are admitted for short periods to the laboratories at the discretion of the professors. The fees for the

Chemical, Metallurgical, and Physical laboratories are £5 per month; for the Biological and Geological laboratories, £4 for month. Admission is granted to persons desirous of attending the lectures without the laboratory instruction on payment of the lecture fees. Officers of the Army, Navy, and Civil Service recommended by their respective Departments are admitted to the lectures and laboratories at half the foregoing charges. The fee for being re-examined in any subject is £1.

Exhibitions, &c.—There are twelve *Royal exhibitions* to the Normal School of Science and the Royal School of Mines. They are of the value of £50 per annum each, and are tenable during the course for the Associateship—that is to say, for three years—except in the case of students entering for the Associateship in Agriculture or Geology, when they are tenable for three years and a half. Three or four exhibitions are therefore generally open for competition each year. They are competed for at the May examinations of the Science and Art Department, and are held from year to year on condition that the holder attends the courses regularly during those years, complies with all the rules laid down for his guidance and passes the examinations required for the Associateship. The exhibitions entitle the holders to free admission to the lectures and laboratories. Candidates must be under twenty-one years of age; there are certain exceptions, however, to this rule. Free *studentships*: Six are awarded annually. Four *scholarships*, of £15 each, awarded to students who have gained the greatest aggregate of marks in the examinations of the first year; and two *scholarships* of £25 each, awarded to those pupils who have gained the greatest aggregate of marks in the examinations of the first two years. The *Edward Forbes medal and prize*: Bronze medal and prize of books for Biology. The *Murchison medal and prize*, for Geology. The *Tyndall prize* of books, for Physics. The *De la Beche medal*, for Mining. The *Bessemer medal*, for Metallurgy.

THE FEMALE SCHOOL OF ART (*Queen-square, Bloomsbury*).

The general course of instruction comprises Geometrical Drawing and Perspective, Freehand Drawing from the Flat and from the Round, Shading from the Flat and from the Round, Drawing from Solid Models, Figure Drawing from the Flat, from the Antique, and from the Life—including Anatomical Studies and Drapery; Modelling in Clay and Wax from the Ornament, Figure, &c.; Painting in Water Colours, Tempera, Fresco, and Oil, from examples of Ornamental Art, from Animals, Landscapes, Flowers, Fruit, &c.; Exercises in Composition and Original Designs for Decoration and Manufactures. There are two sessions in each year.

There is a *juvenile class* for girls of from nine to fourteen years inclusive. Fee, £2 2s.; entrance fee, 10s. 6d. Examinations are held annually, and certificates, &c., awarded.

Studentships of £10 value are granted to all students who pass certain examinations. Two *Gilchrist scholarships* of £50, tenable two years, open to competition; one *scholarship* of £30, some of £20, and others of £10 are also open to competition. Students may compete for the *Queen's gold medal*, the *Princess of Wales' scholarships, gold, silver, and bronze medals*, &c.

Evening Class.—Elementary, £1 1s.; advanced, £2 2s.; artizan, 10s.; entrance fee, 5s. A *scholarship* of £5 is given to the evening class.

Ordinary Fees.—£6 6s. for the session; £10 10s. for two sessions. Entrance fee to all of these classes, 10s. 6d.

London Academy of Music.

The Academy is divided into two departments, one for ladies, the other for gentlemen. It is designed for vocal and instrumental students, amateur and professional, desirous of receiving a complete musical education in this country from the best London professors on the moderate fees of the Continental institutions.

The academical year is divided into three terms—from January to Easter, from Easter to July inclusive, and from September to Christmas.

Fees.—The fee for the prescribed course of instruction is £5 5s. at St. George's Hall and £6 6s. at South Kensington. When half a term is taken or when payment for a term is made in two half fees, an extra 10s. 6d. per half term is charged; but students are only charged half the usual fee for the half-term commencing in June, as, on account of the summer holidays, a whole term cannot be taken. French, German, Italian, Elocution, and Deportment are extras. The fee for each is £1 1s. per term at St. George's Hall, and £1 11s. 6d. at South Kensington. A fee of £3 3s. is charged for students desirous of attending the Operatic Class and the Drawing and Painting Class; entrance fee, 5s.

City and Guilds of London Institute for the Advancement of Technical Education (*Gresham College, E.C.*).

Modelling.—Evening classes: *Fee* for Life classes, 5s. per month; for Ornament classes, 2s. 6d. per month. The course of instruction is arranged to meet the wants of all persons working at plastic art, such as carvers in wood, stone, or marble, plasterers, die sinkers, potters,

modellers for potters, silver and gold smiths, architectural carvers and decorators, sculptors and others.

Design.—Fee for the evening class, 2s. 6d. per month. All members of this class must have taken the second-grade certificate of the Science and Art Department, or must be prepared or preparing to do so. The course is adapted to students engaged in the practice of ornamental art, such as lithographers, engravers, house decorators, designers for textile fabrics, pottery, and all surface decorations.

Wood Engraving.—The studio is open from ten to four and from six to eight. The *fees* are £4 4s. a-year, payable by half-yearly sums of £2 2s. in advance. No student can be admitted for a shorter period than one year. Male and female students occupy separate class rooms. Four *scholarships*, each consisting of a free studentship for one year, will be awarded annually after the first year's practice; these may be renewed in the following year on proof of industry and progress.

China painting.—Fee, 10s. 6d. per month.

All classes except those of Modelling from Life are for male and female students. For further particulars apply at the South London Technical Art School, 122, Kennington Park-road; or at 22, Berners-street, Oxford-street; or at the central office, Gresham College, E.C.

City of London College.

Evening Classes are held in the following subjects: Building Construction, Land Surveying, Machine Construction, Mechanical Engineering, Quantity Surveying, Technical Drawing, &c. There are classes for preparing candidates for the Civil Service, Lower Grade Clerkships, Boy Clerkships, Copyists, and for situations in the Outdoor Customs.

III.—Provincial.

University College, Bristol.

Gilchrist Educational Trust.—A *scholarship* of £50 value, tenable for three years, is annually awarded after competitive examination. Every candidate must have completed his sixteenth, but not his eighteenth year. Candidates approved by the Principal must present themselves at the Midsummer Matriculation examination of the University of London; and the scholarship of £50 is awarded to the candidate who stands highest at that examination, provided that he pass in the Honours division.

Day Lectures.—Political Economy: A course of twenty lectures is given during the first and second terms. *Fee*, £1 1s. per term.

Evening Lectures.—Political Economy: A course of twenty lectures is delivered during the first and second terms.

College Scholarships.—Three *general scholarships* of the value of £25, £15 and £10 respectively, tenable for one year, open to men and women; one *Chemical scholarship* of the value of £25, tenable for one year, open to men and women; two *Catherine Winkworth scholarships* of £15 each, tenable for one year, open only to women who have not held a scholarship at the College for more than one year. *Subjects of examination*: Chemistry (including laboratory work); Arithmetic; Euclid; Algebra; Trigonometry; Conics (Geometrical and Analytical); Differential and Integral Calculus; Applied Mechanics; Machine Construction and Drawing; Heat, Sound, and Light; Electricity and Magnetism; Geometrical Drawing; Geology and Physical Geography; Zoology and Palæontology; Botany, Structural and Physiological; Political Economy; Logic; English History, from the accession of Charles I. to the Revolution; English Literature, the non-dramatic verse and prose of the seventeenth century; Greek Language, Literature and History; Latin Language, Literature and History; French Language and Literature; German Language and Literature. Candidates may take any or all of the above subjects. The minimum age is fixed at sixteen.

Certificates.—Any student who diligently attends a course of instruction in any subject during a session, and obtains a place in the first or second class in the examination at the end of the course, is entitled to receive a certificate from the College.

Regulations for Day Lectures.—Persons under the age of sixteen years seeking admission as day students are required to pass an entrance examination in English Grammar and Composition, and in Elementary Mathematics. This examination will in general be held on the first day of term, but any candidate who desires to be admitted to it must give two days' notice. An entrance fee of 7s. is charged for each course, but all such fees may be compounded for by the payment of a single registration fee of £1 1s. Every student is required to provide himself with a College Calendar.

Fees.—The fees are as a rule: For a course of instruction of three or more hours a week, £5 5s. for three terms, £4 4s. for two consecutive terms, £3 3s. for the first or second terms singly, £2 2s. for the third term.

Civil and Mechanical Engineering and Surveying.—The complete course of instruction extends over three sessions, and is designed to occupy as a rule the first and the second term of each year; certain subjects, however, will be continued in the third term.

Chemistry.—Fees, £4 4s. for two terms; £3 3s. for one term. *Text*

books: Roscoe and Schorlemmer's "Treatise on Chemistry," Thorpe's "Inorganic Chemistry," Fowne's "Manual of Inorganic Chemistry," Miller's "Elements of Chemistry."

Technical Chemistry.—Fee, £2 2s. for two terms; £1 5s. for one term.

Organic Chemistry.—Fee, £3 3s. *Text books*: Armstrong's "Organic Chemistry," Schorlemmer's "Chemistry of the Carbon Compounds," Armstrong and Grove, vol. iii. of "Miller's Chemistry."

Practical Chemistry.—Laboratory Instruction: *Fees* (*in Guineas*):

	The Whole Day.			The Half Day.	
	6 Days a Week.	3 Days a Week.	2 Days a Week.	6 Days a Week.	3 Days a Week.
For the Session	18	10	7½	12	7
,, two terms	13	7½	5½	8½	5
,, one Term	7	4	3	4½	3
,, Month	3	2	1½	—	—

Excursions.—In order that students may have an opportunity of acquiring some knowledge of Applied Chemistry, excursions to some of the mines and manufactories of the neighbourhood are occasionally made. They are conducted by the professor or by the lecturer. Past or present students of the College desirous of taking part in these excursions are invited to apply to the Professor of Chemistry.

Mathematics.—Fee, £5 5s. for each course for three terms; £4 4s. for two consecutive terms; £3 3s. for the first or second term singly; £2 2s. for the third term.

Mechanics.—Fee, £5 5s. for three terms; £4 4s. for two consecutive terms; £3 3s. for the first or second term singly; £2 2s. for the third term.

Engineering.—Fee for each course, £6 6s. for two terms; £3 13s. 6d. for one term.

Machine Drawing.—Fee, £4 4s. for two terms; £2 12s. 6d. for one term.

Experimental Physics.—Elementary Course of Sixty Lectures: *Fee*, entire course, £5 5s.; two consecutive terms, £4 4s.; first or second term only, £3 3s.; third term only, £2 2s.

Practical Physics.—Laboratory Instruction: *Fee*, for the session, £7 17s. 6d.; two terms, £5 15s. 6d.; one term, £3 3s. *Advanced Course*: *Fees*, two terms, £4 4s.; one term, £3 3s.

Astronomy.—Text book: Sir G. Airy's "Elementary Lessons in Astronomy" (Macmillan and Co.). *Fee* for the course, £2 2s.

Natural Philosophy.—Text book: Lodge's "Elementary Mechanics" (W. and R. Chambers). *Fee*, entire course, £5 5s.; two consecutive terms, £4 4s.; first or second term only, £3 3s.; third term only, £2 2s.

Surveying (*Elementary*).—*Fee*, Theoretical course alone, £3 3s.; Field Practice alone, £3 3s.; both courses together, £5 5s.

Geometrical Drawing.—Fee, two terms, £4 4s.; one term, £3 3s. *Advanced Course.—Text book*: Angel's "Practical Geometry and Projection" (Collins, Sons and Co.). *Fee*, two terms, £4 4s.; one term, £3 3s.

Geology.—Text books: "Elementary Lessons in Physical Geography," Geikie; Green's "Geology for Students;" Jukes' "Manual of Geology;" Lyell's "Students' Elements," "Syllabus of Lectures on Geology" (Sollas). References to works treating of special branches of the subject are given during the lectures.

Practical Work.—Facilities will be afforded for the practical study of rocks and fossils.

Excursions.—Excursions to illustrate the subjects of the lectures, and to gain an insight into the principles of Geological Surveying, will be made at intervals to places of interest in the neighbourhood. *Fee*, £4 4s. for two terms; £3 3s. for one term.

Lithology.—Fee, £3 3s.; for the classes on Geology and Lithology, combined, £6 6s.

Palæontology.—Fee, £4 4s. for two terms; £3 3s. for one term.

Zoology.—Text books: "The Anatomy of Invertebrate Animals" (Huxley); "The Anatomy of Vertebrate Animals" (Huxley). *Fee*, £4 4s. for two terms, £3 3s. for one term.

Biology.—Text book: "Elementary Instruction in Practical Biology" (Huxley and Martin). *Fee*, £3 3s. for that part of the course which is given on Tuesdays and Thursdays; £1 11s. 6d. for that which is given on Fridays; £4 4s. for the whole course.

Botany.—Text books: "Text Book of Botany," by Prantl and Vines; Sach's "Text Book of Botany." For field work—Hooker's "Student's Flora of the British Islands," or Babington's "Manual of English Botany." *Fee*, £4 4s. for two terms; £3 3s. for the second term only; £2 2s. for the third term only.

Political Economy.—Fee, £4 4s. for two terms; £3 3s. for the first or second term singly. *Text books*: Marshall's "Economics of Industry;" Mill's "Political Economy." The following are recommended for advanced students: Adam Smith's "Wealth of Nations," Ricardo's "Principles of Political Economy," Bagehot's "Lombard Street," Cairnes' "Logical Method of Political Economy," Blanqui's "History of Political Economy in Europe," Leone Levi's "History of English Commerce," Walker's "Wages Question," Caird's "Landed Interest."

Modern History.—Hand book: Mr. Franck Bright's "History of England." *Fee*, £5 5s. for three terms; £4 4s. for two consecutive

terms; £3 3s. for either the first or second term; £2 2s. for third term.

*English Literature.**—*Hand book*: Mr. Thomas Arnold's "Manual of English Literature." *Fee*, £5 5s. for three terms; £4 4s. for two consecutive terms; £3 3s. for either the first or second term; £1 11s. 6d. for the third term.

Greek and Latin.—Fee, £5 5s. for each course for three terms; £4 4s. for two consecutive terms; £3 3s. for the first or second term singly; £2 2s. for the third term.

Hebrew.—Fee for each course, £5 5s. for three terms; £4 4s. for two consecutive terms; £3 3s. for the first or second terms singly; £2 2s. for the third term.

French Language and Literature.—Text books: Advanced class: Brachet's "French Grammar" (Hachette's English edition); "The Gradual Course of Translation," part ii., Senior Course (Cassal and Karcher); Molière, "Les Femmes Savantes" (A. Roche); Hugo, "Hernani" (Gustave Masson, B.A.). *Elementary class*: Brachet's "Elementary French Grammar" (Hachette's English edition); "The Gradual Course of Translation," part i., Junior Course (Cassal and Karcher); "Le Gentilhomme Pauvre," Henri Conscience (M. Lévy Frères, Paris). Those who wish to enter for the Cambridge Higher Local Examinations will be directed in their studies of the books recommended for it, especially Brachet's "Historical French Grammar," and Geruzez, "Histoire de la Littérature Française."

German Language and Literature.—Fee, £5 5s. for three terms; £4 4s. for two consecutive terms; £3 3s. for the first or second term singly; £2 2s. for the third term. *Text books*: For the Advanced class: "German Studies" by H. Plate, part ii. (Dresden, Louis Ehlermann); Goethe's "Hermann und Dorothea"; Engel's "Philosoph für die Welt." For the Elementary class: "German Studies" by H. Plate, part i. (Dresden, Louis Ehlermann). Hertz: "Koning René's Tochter." N.B.—Those who wish to enter for the Cambridge Higher Local Examination will be directed in their studies of the books recommended, especially: Eve, "Short German Syntax"; Gostwick and Harrison, "Outline of German Literature"; Becker, "Schulgrammatik der deutschen Sprache"; Vilmar, "Geschichte der deutschen National Literature."

Regulations for Evening Lectures.—Each student on admission must sign an undertaking to observe all the regulations affecting students

* During the second and third terms special instruction, beginning on the first Tuesday in November, in the subjects of Group A of the Cambridge Higher Local Examination, or in those of the English Honour Section of the Oxford Examination for Women, will be offered to students of these classes, and to such other students of the College as may satisfy the requirements of the professor.

made by the Council of the College for the time being. Students are required to pay an entrance fee of 1s. per class, or a composition fee of 3s. for three or more classes during one session, to be paid in addition to the ordinary course fees.

Fees.—The fees are, as a rule: For courses in which two hours of instruction are given in the week, 15s. for three terms; 10s. 6d. for two terms; 7s. for one term.

Chemistry.—Fee, 10s. 6d. for two terms; 7s. for one term.

Practical Chemistry.—Fee, £3 3s. for two terms; £2 2s. for one term. No additional charge will be made for re-agents or apparatus, provided the latter be returned undamaged. *Excursions*: In order that students may have an opportunity of acquiring some knowledge of Applied Chemistry, excursions to some of the mines and manufactories of the neighbourhood will occasionally be made. They will be conducted by the professor or lecturer. Past or present students of the College desirous of taking part in these excursions are invited to apply to the Professor of Chemistry.

Mathematics.—Fee for the class in Advanced Mathematics for three terms, 30s.; for two consecutive terms, 25s.; for one term, 20s.

Applied Mechanics and Steam.—Fee for two terms, 10s. 6d.; for one term, 7s.

Heat.—Text books: Deschanel's "Natural Philosophy," vol. ii. only (Blackie and Son); Baynes' "The Book of Heat."

Botany, Structural and Physiological.—Text books: "Text Book of Botany," by Prantl and Vines; Hooker's "Students' Flora of the British Islands"; or Babington's "Manual of English Botany."

Political Economy.—Text books: Marshall's "Economics of Industry," Mill's "Political Economy" (especially book iv., ch. vii., and book v.). Consult also Walker on "Wages," Thornton on "Labour," Howell on "Trade Unions," Brentano on "Guilds," Holyoake on "Co-operation," Crompton on "Arbitration."

Yorkshire College, Leeds.

Instruction is given in Mathematics, Experimental Physics, Chemistry, Geology, Mineralogy, Mining, Physiography, Coal Mining, General Biology, Zoölogy, and Comparative Anatomy, Civil and Mechanical Engineering, Classical Languages, and Literature, Mental and Moral Science, Modern Literature and History, Political Economy, French and German, Oriental Languages, Textile Industries, Dyeing.

Fees.—Registration, £1 1s.; Mathematics, £3 13s. 6d. per session; Experimental Physics, £3 13s. 6d. per session; Chemistry, £4 4s. the complete course; Chemistry of the Non-metals, 10s. 6d.; Practical

Chemistry, from £4 4s. to £17 17s. per session, according to the number of days in each week on which instruction is received; Special Saturday Class in Practical Chemistry, £1 11s. 6d.; General Geological Course, £3 3s.; Practical Geological Course, £1 1s.; the Application of Geology to Mining, £1 1s.; Practical Mineralogy, £1 11s. 6d.; Geological Surveying Class, 5s.; Mineralogical Laboratory, from £2 2s. to £6 6s. per session, according to the number of days in each week in which instruction is given. For the course in Crystallography, Lithology, &c., £5 5s.; Practical Mapping, £2 2s.; Physiography, £1; Coal Mining, £3 3s.; General Biology, £3 13s. 6d. per session; Recapitulation Class in General Biology, 10s. 6d.; Zoölogy and Comparative Anatomy, £2 2s.; Botany, £4 4s.; Engineering Field Work, £4 4s.; Engineering Construction, £4 4s.; Mechanism and Machinery, £4 4s. each course; Geometrical and Mechanical Drawing, £3 3s.; with any other class in Engineering, £1 11s. 6d.; Latin Language and Literature, £3 13s. 6d. per session; Greek Language and Literature, £3 13s. 6d. per session; Readings in Ancient Literature, 5s.; Ancient History, £1 1s.; Mental and Moral Science, £3 13s. 6d. per session; Modern Literature and History, £2 12s. 6d. each class; French Language, £2 12s. 6d., and Literature, £1 11s. 6d.; German Language, £2 12s 6d., and Literature, £1 11s. 6d.; Oriental Languages, £2 2s. (Hebrew); Textile Industries, £18 18s. for the two sessions; Dyeing Department, £3 3s. for the lecture course; Practical Dyeing, from £5 5s. to £21 for the session, according to the number of days in each week on which instruction is received. Afternoon lectures and Saturday classes at small fees are provided for teachers and other students who are unable to attend the regular day classes.

Scholarships and Exhibitions.—The *Cavendish scholarship*, awarded for investigations made by the candidate in Natural Science. The *Salt scholarship*, awarded for proficiency in Language and Literature. The *Akroyd scholarships*, awarded in Natural Science. The *Brown scholarships*, awarded in the branches of science applied to the industrial arts. The *Clothworkers' scholarships* are awarded in textile industries and dyeing. The *Goodall exhibition* is awarded for the same subjects and on the same conditions as the Salt scholarship. The *Leighton Trustees' exhibitions* are intended to afford deserving students at science classes an opportunity of carrying on their studies at the Yorkshire College evening classes.

Value of the Scholarships, &c.—The annual value of the College scholarships is upwards of £700.

The title of *Associate* is conferred on those students who have been

members of the College for not less than two sessions, have attended classes in not less than three of the subjects mentioned below, and have passed—(1) a Preliminary examination; and (2) a Special examination in each class at the end of their curriculum.

Subjects of the Preliminary Examination.—English Composition, Outlines of English History and Geography, Elementary Mathematics, viz., Arithmetic, Algebra to simple equations, and Euclid, books i. and ii.; and Latin, or one modern European language.

Subjects for Special Examination.—(1) Mathematics; (2) Physics; (3) Chemistry; (4) Geology; (5) Biology; (6) Ancient History and Literature; (7) Modern History and Literature.

The *Associateship in Engineering* is awarded to students who have passed the above Preliminary examination, and who have in addition pursued *one* of the following courses of study for not less than two sessions, passing satisfactory examinations therein. *Civil Engineering—First year*: Mathematics and Physics, Geology, Engineering. *Second year*: Mathematics and Physics, Chemistry, Engineering.

Mechanical Engineering.—First year: Mathematics and Physics, and Engineering. *Second year*: Mathematics and Physics, and Engineering.

The *Associateship in Coal Mining* is awarded to students who have passed the Preliminary examination and have pursued the following course of study for not less than two sessions, passing satisfactory examinations therein. *First year*: Mathematics and Physics, Geology, Engineering, Coal Mining. *Second year*: Mathematics and Physics, Chemistry, Engineering, Coal Mining.

Evening classes are held in the chief subjects of study, and certificates are awarded to students who pass a satisfactory examination at the end of each course. The fees are nominal.

University College, Liverpool.

The academical year consists of three terms, lasting respectively from the end of September to Christmas, from January to Easter, and from Easter to the end of June.

Day classes for regular students are carried on throughout term time. There are also *evening classes* throughout the Michaelmas and Lent terms, and to a limited extent throughout the summer term.

All classes except those of the Medical Faculty are open to students of either sex. No person under fifteen years of age can be admitted a student, and all under sixteen are required to pass a Preliminary examination previous to admission.

Instruction is provided in Latin, Greek, English, French, German, English Literature, History, Philosophy, Political Economy, Physics, Natural History, Chemistry, &c. Candidates are specially prepared for the London University examinations.

Day classes are held three days in each week at the following *fees*:

	For One Term.			Two Terms.			Three Terms.		
	£	s.	d.	£	s.	d.	£	s.	d.
For 1 hour per week	0	15	0	1	2	6	1	10	0
,, 2 hours ,, ...	1	7	6	2	2	0	2	15	0
,, 3 hours ,, ...	2	0	0	3	0	0	4	0	0
,, 4 hours ,, ...	2	10	0	3	15	0	5	0	0

For special classes and for practical work in the laboratories and natural history practical room, extra fees will be charged.

Firth College, Sheffield.

Both *day* and *evening classes* are held for instruction in all the subjects taught at the College. Candidates for admission should be not less than seventeen years of age. If not so old they will be required to pass an Entrance examination, unless they have previously passed the Cambridge or Oxford Senior Local or some corresponding examination.

There are two *entrance exhibitions*, each of £15 for one year; one awarded for Classics, the other for Mathematics and Physical Science. Candidates not to be over twenty-one years of age. Two *exhibitions* of £15 for one year, awarded at the annual June examination.

Subjects of Instruction, Fees, &c.—Each subject marked with an asterisk is given in three yearly courses: *Mathematics, £2 12s. 6d. per course; *Physics, £2 12s. 6d.; *Practical Class in Physics, £2 12s. 6d.; *Classics (Greek and Latin), £4 4s.; either language separately, £2 12s. 6d.; Ancient History, 10s. 6d. per term; Chemistry, £3 13s. 6d. per course (given in two courses); Analytical Chemistry, £1 11s. 6d. the course. Practical Chemistry: *Fees for the course*—Six days a week, £18 18s.; Four days a week, £14 14s.; three days a week, £10 10s.; two days a week, £7 10s. 6d.; one day a week, £4 4s. *Fees for shorter periods*: For one month, £3 13s. 6d.; two months, £6 6s.; three months, £9 9s.; four months, £12 1s. 6d.; five months, £14 3s. 6d. Students entering for short periods are entitled to work on every day in the week. Harmony—fee for each course, £1 11s. 6d. English Literature, 10s. 6d. the course; French and German, for both languages, £4 4s. the course; for either language separately, £2 12s. 6d.

Evening lectures and classes: Mathematics, 10s. 6d. per course (the instruction is given in two consecutive years). Geology, 9s. the

course; Classics (Greek and Latin), fee for the course, 10s. 6d. for each language (the instruction is given in two consecutive years); Ancient History, 5s. per term, or 9s. per two terms; Chemistry, 5s. per term, or 9s. per two terms; Technological Chemistry, £1 1s. for the course; Practical Chemistry—fee for the course, £2 2s.; Harmony, 10s. 6d. the course; French conversation, &c., 10s. 6d. the course; French drama, 7s. 6d. per term; French translation, 5s. per term.

University College, Nottingham.

Evening classes, at small fees, are held in the following subjects: History, Literature, Physics, Mathematics, Chemistry (Theoretical, Practical, and Technical), Geology and Physical Geography, Biology, Latin, French, German, and Theory of Music.

Evening Science classes for the preparation of candidates for the Government Science and Art Department examinations are held. *Fee* to each, 2s. 6d. per session.

Day classes are held in Literature, English History, Latin, Greek, French, German, French Literature, German Literature, Mathematics, Physics (Theoretical and Practical), Chemistry (Theoretical, Practical, and Technical), Biology, Geology. Classes are also held from time to time in subjects other than those enumerated—*e.g.*, Light and Colour, Telegraphy, Pharmacy, Physiology, &c.

Students attending a three years' course at Nottingham are excused one year's residence at Oxford or Cambridge.

The minimum number of hours a student must attend per week to avail himself of the above will most probably be fixed at four, so as to enable persons engaged in business to take advantage of the scheme.

University College of Wales (*Aberystwith*).

Students are not admitted under fifteen years of age. The *fees* are: £10 per session paid in advance; Practical Chemistry, 5s. per term extra. For any single class, £1 per term. Arrangements have been made for the boarding and lodging of students within the walls of the College. Board and lodging, £35 per session. Any student may have two rooms to himself on payment of £5 more.

Exhibitions, Scholarships, and Prizes.—At the commencement of every session four *exhibitions* of £15 a year each, tenable for one year, will be awarded after competition; also an *entrance scholarship*, value £20, tenable for two years; also an *entrance scholarship*, value £20, tenable for one year. At the close of every session there will be awarded after competition the following *scholarships*: For Classics, £20; for

English Language and Literature, with one Continental Language or Welsh, £20; for Mathematics, pure and applied, £20; for Natural Science, £20; for Oriental Languages, £20; for Logic and Philosophy, £20. Students can only compete for these scholarships at the end of their first or second session. If obtained at the end of the second session, they are tenable for one year, but if at the end of the first session, for two years, subject to the conditions of attendance, good conduct, &c. The following *prizes* are awarded: To students who matriculate at London University within six terms from entrance—if in Honours, £7; if in the first division, £5. To students who pass their First B.A. or First B.Sc. (Lond.) within two academical years after matriculation, £10. To students who pass their Second B.A. or Second B.Sc. within two academical years after their First B.A. or B.Sc., £10.

The style of *Associate of the University College of Wales* will be conferred upon students of the College upon their passing the following examinations: The *First examination*, upon or soon after admission to the College—in English, Latin, Arithmetic, Algebra, and two of the following: Greek, French, German, English History, Geometry, Elementary Statics and Dynamics, Elementary Physics (Light and Heat). The *Second examination*, after the expiration of two terms, is in: (A) English, and *either* (*a*) French or German, *or* (*b*) Euclid and Algebra; (B) Any two of the following subjects: (1) English (advanced), or English History; (2) Greek; (3) Latin; (4) History and Geography of Ancient Greece and Italy; (5) Algebra, Euclid, and Trigonometry; (6) Statics, Dynamics, and Hydrostatics; (7) Experimental Physics; (8) Chemistry; (9) Geology and Palæontology; (10) Mineralogy and Crystallography; (11) Zoology with Animal Physiology or Comparative Anatomy; (12) Botany with Vegetable Physiology; (13) French (unless previously taken); (14) German (unless previously taken); (15) Italian; (16) Hebrew; (17) Arabic; (18) Syriac; (19) Ethiopic; (20) Sanskrit; (21) Persian; (22) Turkish. The *Final examination* is in any three of the following: (1) English; (2) Greek; (3) Latin; (4) French; (5) German; (6) Italian; (7) Welsh; (8) Hebrew; (9) Arabic; (10) Syriac; (11) Ethiopic; (12) Sanskrit; (13) Persian; (14) Turkish; (15) Mathematics; (16) Physics; (17) Geology and Palæontology; (18) Mineralogy and Crystallography; (19) Zoology and Comparative Anatomy; (20) Animal Physiology; (21) Botany with Vegetable Physiology; (21) Chemistry; (22) Political Economy; (23) Principles of Law; (24) Constitutional History.

The *session* begins in September, and comprises three terms: Michaelmas, from September to December; Lent, from January to March; and Easter, from April to the end of June.

Stonyhurst Roman Catholic College.

The Course of Higher Study.—This course comprises five branches: (*a*) Preparation for the Degrees of Arts and Science at the University of London; (*b*) preparation for the various Civil and Military examinations; (*c*) a full course of Mental Philosophy in Latin, or an abridged course in English; (*d*) A complete course of Physics and Chemistry; (*e*) Modern Languages. The students attending these courses have their own private and public rooms, and form an entirely distinct community. They are allowed the use of the books in the Great Library of the College, and of a copious reference library, furnished with a view to their special wants; of a complete chemical laboratory and extensive apparatus for experimental philosophy. The College places also at their disposal a well-appointed astronomical observatory, extensive collections for the study of natural history, &c.

Fees.—£12 12s. monthly (payable half-yearly in advance), and £5 5s. entrance.

Vacations.—The Summer Vacation begins on August 1st, and ends on October 1st; the Christmas Vacation lasts three weeks.

Letters should be addressed, "Stonyhurst, Blackburn"; parcels and telegrams, "Stonyhurst, Whalley." The College is four miles from the Whalley station of the Lancashire and Yorkshire Railway, five from Clitheroe, eleven from Blackburn, fourteen from Preston.

Royal Agricultural College, Cirencester.

The object of the institution, in the words of its charter of incorporation, is, by combination of college and farm, "to teach the science of Agriculture and the various sciences connected therewith and the practical application thereof in the cultivation of the soil and the rearing and management of stock"—in other words, to impart a sound knowledge of the practice with the science of Agriculture and kindred subjects, and so in the most efficient manner to train and educate students for the profession or business of Agriculture, whether as land owners or occupiers, land agents, surveyors, factors, or stewards, at home, in India, or the Colonies. In addition, however, to affording a thoroughly scientific and practical education for agricultural pursuits and the professions of surveyors, estate agents, &c., the College offers to its students many of the general advantages (educational and social) of a university course, with a special training for the duties of country gentlemen in the management of their landed estates.

The College is provided with excellent Laboratories, Museum,

Botanic Garden, Veterinary Hospital, and all the best appliances, and a very complete and eminent staff.

Fees.—In-students, £135 per annum, £45 per term; out-students, £75 per annum, £25 per term.

A limited number of furnished private rooms within the College is reserved for students, and for which there is an extra charge of £10 10s. per term. The fees include all College charges except laundress—£1 per term. The curriculum extends over two years or six sessions. There are three sessions in each year—Spring, Summer, and Winter.

Scholarships and Prizes.—Six *scholarships* (three of £25 and three of £10) are awarded annually. Six *scholarships*, each of £200 a year, tenable for two and a half years, are open to native Indian graduates of the University of Calcutta. *Gold and silver medals, books*, and other *prizes*, more than 200 in number, are awarded annually.

The College *diploma*, which admits those holding it to the position of graduate, under the title "M.R.A.C.," and which has become a valuable passport to agencies and other agricultural appointments, is obtainable the term next after a two years' course by those duly qualified students who pass a satisfactory Final examination in Agriculture, Agricultural Chemistry, Book-keeping, and any one other subject selected by the candidates from the following: Estate Management, or Agricultural Law, or Building; Natural History (Geology, or Botany, or Zoology); Physics (Hydrostatics, Hydraulics, Pneumatics, Heat and Meteorology; or Mechanics, Steam Engine, and Meteorology); Land Surveying and Engineering; or Veterinary Science (Physiology and Pathology, including the Pathology of Parturition). Certificates of Associateship (A.R.A.C.), and Certificates of Proficiency in particular subjects are also issued.

CHAPTER III.

IRISH UNIVERSITIES, COLLEGES, AND SCHOOLS.

Dublin University—Royal University of Ireland—Catholic University of Ireland—Queen's College: Cork, Galway, Belfast—Royal College of Science—Royal Irish Academy of Music.

DUBLIN UNIVERSITY.

(*Extracted by special permission from the University Calendar.*)

The University of Dublin was founded by Queen Elizabeth, A.D. 1591. On the 3rd day of March in that year a College was incorporated by Charter or Letters Patent, as "The Mother of an University," under the style and title of "The College of the Holy and Undivided Trinity, near Dublin, founded by Queen Elizabeth."

Every student, at his entrance into Trinity College, must select a Tutor, to whom the guardianship of his collegiate interests is intrusted. The ordinary lectures given to the students in Arts are (except in some special courses) delivered by the Senior Tutors and Tutors. The distribution and arrangement of these lectures is settled each term by a committee of Tutors. Special lecturers are selected to lecture candidates for Honours. These lecturers are now paid a small special salary out of the revenue of the College, and the Provost and Senior Fellows have consequently reserved to themselves the right of appointment.

The terms of this University were formerly four, and depended on the movable feasts—they were, therefore, of unequal length and variable; but, by the Royal Statute of 3 Will. IV. (1833), they are now *three* only, and are fixed by invariable rules. Michaelmas, or October term, begins on the 10th of October—ends on the 20th of December; Hilary, or January term, begins on the 10th of January—ends on the feast of the Annunciation of the Blessed Virgin Mary; Trinity, or Midsummer term, begins on the 15th of April—ends on the 30th of June. But if it should happen that Easter fall within the limits of Hilary or Trinity Term, then the term within which it falls shall be increased by an additional week.

Examinations for Women.—Examinations will be held at any place

where a Ladies' Superintending Committee shall be constituted, and at least ten candidates guaranteed to present themselves. No head of any educational establishment shall be a member of a Ladies' Committee. An examiner will be sent to each place, who, in conjunction with the Ladies' Committee, will arrange the details of the examination. The Registrar of Examinations for Women will exercise a general supervision over the conduct of all the examinations. Candidates are requested to apply to one of the local secretaries for the necessary forms. Every candidate presenting herself for examination will be required to pay a University fee of £1, together with the local fee of 5s.; the total fee of £1 5s. being payable to one of the local secretaries at least two days previous to the examinations. The University fee will be reduced to 10s. in the case of a candidate seeking only a special certificate of honour. The Dublin examination will be held in the New Hall, Trinity College. The hours of examination will be from ten o'clock a.m. to noon, and from two o'clock p.m. to four o'clock p.m., daily. No class lists will be published; but after each examination, notice of the result, and a certificate, if awarded, will be sent to the home of each candidate. There are three examinations, which may be attended in succession at intervals of one or more years. Students are *advised* to attend them all; but a candidate may present herself at any one, independently of the others. They are: (1) The First or Junior Examination; (2) the Second or Intermediate Examination; (3) The Third or Senior Examination. No one can obtain a junior certificate who shall have completed her eighteenth year before the 1st of January of the year in which she offers herself for examination. There are no limits of age for candidates at the other examinations. Copies of the Regulations respecting courses, scholarships, &c., may be had by application to one of the local secretaries; to Messrs. Hodges, Figgis, and Co., 104, Grafton-street, Booksellers to the University, or at the University Press, Trinity College.

Honour Course.

Students may become candidates for Honours in the following subjects, at each term examination in the Undergraduate Course: *Junior Freshmen*: Mathematics; Classics. *Senior Freshmen*: Mathematics; Classics; Logics. *Junior Sophisters*: Mathematical Physics; Classics; Metaphysics; Experimental Science; Natural Science; Modern History; Modern Literature. *Senior Sophisters*: Mathematical Physics; Classics; Ethics; Experimental Science; Natural Science; History and Political Science; Modern Literature. Prize examinations are also held in the following subjects, in the Michaelmas term of

the Senior and Junior Freshman years: Modern History; English Literature and Composition; French; German. At the B.A. Degree examination, students may go out in Honours in seven subjects, viz.: Mathematics and Mathematical Physics, Classics, Mental and Moral Philosophy, Experimental Science, Natural Science, History and Political Science, Modern Literature. At all examinations for Honours, candidates are liable to be examined in the *ordinary* subjects of examination of the course in which they present themselves for Honours, in *addition* to those specified.

Examination for Moderatorships.

At the Michaelmas examination of the fourth year (or the B.A. Degree examination) examinations for Moderatorships are held in each of the following subjects: (1) Mathematics and Mathematical Physics; (2) Classics; (3) Mental and Moral Philosophy; (4) Experimental Science; (5) Natural Science; (6) History and Political Science; (7) Modern Literature.

Catechetical Course.

Catechetical Lectures are held every Saturday morning, at half-past nine o'clock, for the two Freshman Classes only. Catechetical examinations are held at the beginning of each term (immediately after the term examinations), for the benefit of those students who have not been resident during the preceding term.

Rules relating to Catechetical Terms and Examinations.—To rise from the class of Junior Freshman to that of Senior Freshman, one Catechetical term or examination, at least, in the Junior Freshman year, is required. To rise from the class of Senior Freshman to that of Junior Sophister, four Catechetical terms or examinations must be kept in the two Freshman years, of which two at least must be in the Senior Freshman year, and one must be the Trinity term of lectures, or the Michaelmas examination of that year. If a student have omitted one of the required terms or examinations he will be allowed to supplementalise in the Michaelmas term, or at the Hilary examination of his Junior Sophister year, in the subject of the last omitted Catechetical term or examination. To a student who exhibits peculiar merit, either at lectures or at an examination, a *premium* in books of the value of £2 is awarded, unless such a premium has been previously obtained in the same year, in which case a certificate is awarded instead. The fact of having obtained a prize in the earlier part of the year does not debar a Senior Freshman from being awarded one of the prizes offered at the end of Trinity term, or at the Michaelmas term examination. At these Prize examinations students obtain credit for the term without pre-

senting themselves at the ordinary lectures or examinations. Students not members of the Church of England or Ireland and students in Holy Orders are not required to keep Catechetical terms.

Subjects of Catechetical Examinations.—The following are the subjects of the Catechetical lectures and examinations (N.B.—The subjects printed in italics are to be considered as additional for Honours, and not required generally.): *Junior Freshmen*: Michaelmas term and Hilary examination, the Gospel of St. Luke; *the three other Gospels.* Hilary term and Trinity examination, the Acts of the Apostles; *Paley's Horæ Paulinæ.* Trinity term and Michaelmas examination, Secker's Lectures on the Creed; *Critical knowledge of the Scripture references therein. Senior Freshmen*: Michaelmas term and Hilary examination, Genesis, and the first twelve chapters of Exodus; *the remainder of Exodus, with the Books of Numbers and Deuteronomy.* Hilary term and Trinity examination, the two Books of Samuel, and first twelve chapters of First Book of Kings; *the remaining history from beginning of Joshua to end of Second Book of Kings.* Trinity term and Michaelmas examination, Paley's Evidences, part i., proposition i.; *Butler's Analogy, part* ii., *chapters* 5 *and* 7.

Voluntary Catechetical Examinations.—The Board have directed that a system of Voluntary Catechetical examinations shall be extended over the two Sophister years, and that the Catechist shall be authorised to grant a special certificate to students who shall have passed these examinations, as well as those of the Freshman years, with credit. The following has been adopted as a Provisional Course for the examinations of the Sophister years: *Junior Sophisters: Hilary*: St. John's Gospel, in Greek and Revised Version; Barrett's Companion to the New Testament. *Trinity*: Epistle to the Romans, Greek; Westcott's Bible in the Church. *Michaelmas*: First Epistle to the Corinthians, in Greek; Blunt's Sketch of the History of the First Three Centuries. *Senior Sophisters*: *Hilary*: Epistle to the Hebrews; Anselm's Cur Deus Homo. *Trinity*: Blunt's History of the Reformation Period; Epistle to the Galatians; Jewel's Apology, in Latin. *Michaelmas*: English Bible; Boultbee on the Articles.

Lectures.

Lectures are delivered in all the courses by which terms may be kept in Arts, or in which Honours can be obtained at the Term examinations, in the subjects which are studied in the four Professional Schools, and in various other departments of knowledge.

Lectures in the Courses in Arts.—Ordinary and Honour Lectures: Lectures are delivered by the tutor professors and tutors in the follow-

ing subjects: Mathematics, Mathematical Physics, Classics, Mental and Moral Science, Experimental Physics, Geology, History. All students attending ordinary lectures in Classics are required to bring compositions on Saturdays. Special lecturers are selected to lecture candidates for Honours in Mathematics, Mathematical Physics, Classics, and Mental and Moral Science. Candidates for Honours in Classics are also lectured in Composition by the Lecturer in Greek and Latin Composition, who likewise lectures Junior Sophisters in the Classical Honour Course appointed for their class. In Michaelmas and Hilary terms, the Professors of Greek and of Latin lecture Senior Freshmen who are candidates for Honours in Classics. The Professor of Applied Chemistry and Mineralogy lectures Senior Sophisters, in Michaelmas and Hilary terms, in Chemistry; and in Trinity Term, in Mineralogy. The Professor of Botany lectures Junior Sophisters, upon three days in each week during six weeks of the Michaelmas and of the Hilary term. The Professor of Zoology lectures during the same period upon alternate days with the Professor of Botany. The Professor of Geology lectures Senior Sophisters, upon two days in each week during the same terms. Each of the Professors of Botany, of Zoology, and of Geology, gives, likewise, a course of demonstrations upon the subject of his lectures in each of the three terms. In the Michaelmas and Hilary terms the Professor of the Romance Languages lectures, in French, Senior Sophisters on three days in each week, and Junior Sophisters on three days in each week. The Professor of German lectures, in German, Senior Sophisters on three days in each week, and Junior Sophisters on three days in each week. In Trinity term, Junior Sophisters are lectured in French and in German, as in the other two terms. The Professor of Modern History delivers, each term, courses of lectures in accordance with arrangements made at the beginning of the term. The Professor of Political Economy delivers a course of, at least, nine lectures during some one of the three academical terms, which are free to all students. The Professor of English Literature delivers lectures on three days in each week during term. The Professor of the Romance Languages lectures two classes (one of Senior Students, the other of Junior Students) in French during term. The Professor of German lectures in classes such students as present themselves for instruction. These lectures of the Professor of the Romance Languages and of the Professor of German are intended for candidates for Honours. Students attending these lectures pay for each term a *fee* of £1 1s., payable to the Junior Bursar.

Lectures for Candidates for Moderatorships.— Mathematics and Mathematical Physics: Erasmus Smith's Professor of Mathematics

delivers lectures on five days in each week, at ten o'clock, a.m. The University Professor of Natural Philosophy delivers lectures three times a week; the days and hours are fixed at the commencement of each term. *Classics*: The Professor of Greek delivers lectures on Tuesdays, Thursdays, and Saturdays, during term. The Professor of Latin delivers lectures on Mondays, Wednesdays, and Fridays, during term. The Professor of Ancient History lectures during term, on days of which public notice is given. The Professor of Sanscrit lectures on Comparative Grammar, on two days in each week, during term. *Logics and Ethics*: The Professor of Moral Philosophy delivers lectures during term, of which public notice is given. Lectures are also delivered by the Mental and Moral Science Honour Lecturer of the Senior Sophister Class. *Experimental Science*: Candidates may attend the lectures of the Professors of Experimental Philosophy, and of Applied Chemistry. Notice of the day and hours of these lectures is given at the commencement of each term. Candidates for Moderatorships in Experimental Science are entitled to attend the laboratory of the Professor of Chemistry, from the 1st of November to the 30th of June, on payment of £5 5s. to the Bursar. *Natural Science*: Candidates may attend the lectures and demonstrations of the Professors of Geology, of Botany, and of Zoology. *History and Political Science*: The Professor of History lectures on two days in each week, during term. In Trinity term the Professor of Political Economy lectures candidates for Moderatorship on five days in each week. *Modern Literature*: Candidates may attend the lectures already mentioned of the Professor of English Literature, of the Professor of the Romance Languages, and of the Professor of German. In Trinity term, the Professor of German gives prelections on some subject connected with the Literature of Germany, which are open to the public, and are advertised in the daily papers.

Lectures in the Professional Schools.—An account of these lectures will be found under the head "Professional Schools." Lectures connected with the Professional Schools which are not intended for professional students exclusively are mentioned also under the head "Lectures in the Courses in Arts," "Miscellaneous Lectures," or "Public Lectures."

Miscellaneous Lectures.—Mathematics: The Professor of Mathematics delivers lectures on three days in the week, during term, to candidates for fellowship, and for Bishop Law's Mathematical prizes. *Astronomy*: The Professor of Astronomy lectures on Mondays and Thursdays in Hilary term. *Hebrew Lectures*: All undergraduate students are permitted to attend Hebrew Lectures. The Professor of Hebrew delivers

public prelections from time to time as required by the rules of Erasmus Smith's Board, and lectures the Senior Class every Wednesday. Due notice of the hours at which these lectures are held is given at the beginning of each term. Erasmus Smith's Lecturer in Hebrew lectures the Middle Class, on Tuesdays and Thursdays, at nine o'clock. The lectures of the assistants, for the Junior Class, are also delivered on Tuesdays and Thursdays, at the same hour. For the regulations and subjects of these lectures, *vide infra*, Divinity School. *Irish*: The Professor of Irish lectures on two days in the week, during term. *Arabic, Persian, and Hindustani*: The Professor of Arabic delivers six prelections each year on the subjects of his professorship, and teaches Arabic, Persian, or Hindustani, to such students as may present themselves for instruction, at the commencement of each term, at the rate of £3 3s. per term. The professor also receives pupils at any time at fees set forth in the "Calendar." The Board have authorised the professor to give certificates (similar to those given by the Professor of Hebrew) to such students as he may, upon examination, think entitled to that distinction. The Board have instituted an annual *prize* of £10 for proficiency in Arabic. An examination will be held annually in Trinity term, of students desiring certificates, or wishing to compete for the above prize. No student will be admitted to this examination unless he has studied under the professor for, at least, three terms. *Sanscrit*: The Professor of Sanscrit delivers lectures, and receives pupils, under the same regulations and conditions as the Professor of Arabic. The Board have instituted an annual *prize* of £5 for proficiency in Sanscrit. The conditions are the same as those just stated for the prize in Arabic.

Public Lectures.—The following lectures are open to the public, as well as to all students: The prelections of—The Professor of German, the Regius Professor of Divinity, Archbishop King's Lecturer in Divinity, the Professor of Hebrew, the Professor of Biblical Greek, the Regius Professor of Laws, the Regius Professor of Feudal and English Law; the Lectures of—the Professor of Astronomy, the Professor of Ancient History, the Professor of Moral Philosophy, the Professor of Mineralogy, the Professor of Geology, the Professor of Ecclesiastical History, the Professor of Irish; four of the lectures of the Professor of Natural and Experimental Philosophy, and of the Professor of Oratory; the lectures delivered to medical students of the Professor of Comparative Anatomy.

Attendance of Scholars at Lectures.—The following rules have been passed by the Board with regard to the attendance by scholars at Lectures. I. *Graduates*: All scholars who have actually passed the

B.A. Degree examination are exempted from suspension for non-attendance at Lectures. II. *Undergraduates*: (1) Every undergraduate scholar shall be required to keep each term, by attendance either at lectures, or the subsequent examination, on pain of being conditionally suspended. (2) Full attendance on the lectures of the University professors, such as would prove that an undergraduate scholar is engaged *bonâ fide* in preparation for the Moderatorship or India Civil Service Examinations, or in professional studies, shall be held sufficient to exempt him from suspension for that term. (3) Any undergraduate scholar who shall have been conditionally suspended under the foregoing rule shall be restored on obtaining an Honour at a subsequent examination. (4) Any undergraduate scholar who shall remain conditionally suspended for three terms shall absolutely forfeit his salary for the past year, unless he shall produce to the Board satisfactory excuses for his neglect.

Examination for Scholarship.—(1) There are two classes of scholars elected for Scientific and for Classical merit, respectively. (2) Candidates for Science scholarships are examined in all the Pure and Applied Mathematics of the undergraduate course, to the Trinity examination of the Junior Sophister year inclusive, together with Walker's edition of Murray's "Logic," the selected portions of Locke's "Essay," Mansel's "Metaphysics," part i., and Mill's "Logic," book i., book ii., omitting chapter 7, together with book iii., chapters 1 to 13, both inclusive. (3) The examination for Science scholarships is held on Monday, Tuesday, and Wednesday, in Ascension week, from 9 to 12 in the forenoon, and from 2 to 5 in the afternoon, of each day. (4) The following numbers have been adopted to represent the highest possible answering in the several courses: Pure Mathematics, 250; Applied Mathematics, 250; Logic and Metaphysics, 100. (5) Candidates for Science scholarships will be at liberty to *substitute* the Honour course in Experimental Physics of the first two terms of the Junior Sophister year for the course in Logics which is above prescribed, the maximum marks to be given in Experimental Science being the same as for Logics—viz., 100. (6) Candidates for Classical scholarship are examined in all the Classics of the Undergraduate Honour course, to the Trinity examination of the Junior Sophister year, inclusive, and in the Classics of the Entrance course, omitting Walker's "Selections from Lucian," and the portions of the New Testament, of the "Anabasis of Xenophon," and of "Cæsar de Bello Gallico," which are included in that course. They are also examined in Greek, Latin, and English Composition. (7) The examination for Classical scholarships is held on Friday and Saturday of Ascension

week, and on Monday and Tuesday of the week following, from 9 to 12 in the forenoon, and from 2 to 5 in the afternoon, of each day. (8) On or before the day of election every candidate for scholarship must send to the Provost and each of the Senior Fellows, or to the Registrar, his name and the name of the county in which he was born. The form in which this is generally done is as follows: "Ego, A. B. —— filius, natus in comitatu N., sub ferula —— educatus, Discipulatum a te humillime peto." Every candidate for Fellowship must make a similar return to the Provost *before* the day of election.

For *examination for Sizarships*, see "Calendar."

Studentships.

By the Royal Statute of 22nd Victoria, fourteen *studentships* were founded in Trinity College, open to candidates of all religious denominations, to be tenable for a period not exceeding seven years, with a salary to be fixed by the Provost and Senior Fellows, not exceeding £100 per annum for each. No Fellow can be elected to a studentship; and in case any person holding a studentship shall be elected a Fellow his studentship shall thereupon become vacant. The following regulations have been made by the Board, under the authority of the foregoing statute, with respect to the election of students: I. Two students shall be elected annually, one from the Senior Moderators in Mathematics and Physics, and one from the Senior Moderators in Classics. II. A member of the Board shall preside at each Moderatorship examination. III. At the next election to studentships, the results of the Moderatorship examinations shall be the basis upon which the Board will elect, according to the following regulations: (1) In addition to the primary courses, Mathematics and Physics, or Classics, the Board will take into account the answering of the candidates in one other Moderatorship course. (2) Students taking the Mathematical and Physical Moderatorship as a primary course may take up Classics as a secondary course, and *vice versâ*. (3) The weight to be assigned to the Primary and Secondary courses respectively shall be in the proportion of 3 to 2. (4) A minimum shall be fixed for each course, and the merit of each candidate shall be measured by the excess of his answering above that minimum. The minimum in each course shall be one-fourth of the total weight of the course. IV. The examiners in each course shall make a full report to the Board of the answering of the candidates, and each elector shall vote for the two candidates whose answering, on the whole, shall appear to him the most distinguished; provided there be no objection to such candidate on the score of moral character or conduct. V. No student who, after the date of this

decree, shall drop more than one class, will be permitted to be a candidate for Moderatorship. VI. After the year 1860 no person will be permitted to be a candidate for Moderatorship who shall have dropped a class after the Michaelmas examination of his Junior Sophister year. VII. No change in the mode of electing to studentships shall be made, unless after a year's previous notice. VIII. In case any person holding a studentship shall be elected to a fellowship of any college in Oxford or Cambridge Universities, his studentship shall thereupon become vacant.

Brooke Prizes.—On the 11th October, 1879, it was resolved by the Board, with the assent of the Misses Brooke:

That two prizes, equal in amount, and representing the interest of the sum of £2000 presented by the Misses Brooke, be constituted, to be given annually to the candidates for Moderatorship who rank next in order, severally, to the Moderators who are appointed students for Mathematics and for Classics, the Prizes to be called the Brooke Prizes.

Prizes not attainable at Term Examinations or Lectures.

In the case of all prizes, the Board reserve the power of diminishing the amount of the prize, or withholding it altogether, if insufficient merit has been shown by the candidates.

Premiums at the Examinations for Fellowships.—The Provost and Senior Fellows, at every Fellowship examination, grant premiums to such candidates as appear to them to deserve encouragement, and in such proportions as they consider merited by the answering,

Prizes in Subjects connected with the Study of Divinity.—Five *scholarships* tenable each for five years from the date of election, with a salary of £20 a year, one to be elected annually according to such regulations as the Provost and Senior Fellows shall from time to time enact, in conformity with the wishes of the Founder, as recorded in the Register of the College. *The Elrington Theological Essay prize*: Open to B.A.'s of not more than three years' standing. The essays, clearly and legibly written, with fictitious signatures, are to be given to the Provost, or to the Regius Professor of Divinity, on or before the 1st day of November in each year. The value of £40 in theological books will be given to the writer of the best essay. *Ryan prize*: In Easter week of 1881, and of the alternate years following, a *premium* of £4 12s. 4d. will be given to the graduate of Trinity College who shall be the author of the best declamation *in laudem Evangelii*, either in English or in Latin, provided sufficient merit be shown. In the Easter week of 1882, and of the alternate years following, a premium of £4 12s. 4d. will be given to the graduate of Trinity College who shall produce from the Bible itself the

best argument in favour of the truth of Christianity, provided sufficient merit be shown. Should either premium not be merited, then the prize above mentioned will be given to the person obtaining the first place at the examination for admission to sizarships in the year in which the premium has not been awarded. *Prizes in Biblical Greek*: A sum of £15 is placed at the disposal of the Professor of Biblical Greek, to be given in prizes to the best answerers at an annual examination, which is held in Hilary term, on a day named in the Almanack, usually the first Wednesday in March. Candidates for prizes at this examination must be at least of Junior Sophister standing. *Ecclesiastical History prizes*: They consist of two *premiums* (one of £10, the other of £5) given at an annual examination, held by the Professor of Ecclesiastical History. If the answering be satisfactory, the professor will give two *additional premiums*, one of £3 and another of £2. This examination is held in Trinity term, and is open to such students as shall have attended the professor's lectures during two terms of the actual year in which they present themselves as candidates.

Prizes in Mathematics.—The Lloyd exhibitions (two): The following course has been appointed for the *examination* for these exhibitions: *Mathematics*: Luby's Trigonometry; Lloyd's Analytical Geometry; Lacroix's Elemens d'Algebre; Lacroix, Differential Calculus (omitting applications to curved surfaces); Newton's Prime and Ultimate Ratios. *Physics*: All the Physics of the Undergraduate course; Lloyd's Mechanical Philosophy. The exhibitions consist of the interest of about £1112, at 3 per cent. *Bishop Law's Mathematical prizes*: In the year 1796, the sum of £735 was given to the College by John, Lord Bishop of Elphin, on condition that it should be applied to the purpose of encouraging the study of Mathematics, according to the following scheme:

(1.) The sum of £20 to be given to that Junior Bachelor who shall pass the best examination in Algebra, the application of Algebra to Geometry, and Spherical Trigonometry; and £10 to that Junior Bachelor who shall appear to be the second best proficient in the same subjects.

(2.) The examination to be held on two days in Michaelmas term, of which public notice to be given on the first day of said term, and the premiums shall be adjudged on the last day of the same, or the day before it, if it should fall on a Sunday.

(3.) The examiners of the candidates for the premiums to be the Professors of Mathematics, Natural Philosophy, and Astronomy.

(4.) The sum of £5 to be given, in turn, to each Professor, in order that he may entertain the other two examiners at dinner, on the day that the premiums are adjudged: the rotation to begin with the senior.

The second of these regulations has been altered. The examination is now held on Trinity Tuesday in each year. *The M'Cullagh prize*: Of £90 value. The examination is held in Hilary term. *Subjects*: Mathematics and Physics.

Prizes in Classics.—Bishop Berkeley's gold medals: In the year 1752, May 8, the Provost and Senior Fellows agreed to give annually, for ever, two gold medals for the encouragement of Bachelors of Arts in the study of the Greek Language; having received a benefaction of 120 guineas, besides a die, from the Right Rev. Dr. George Berkeley, lord Bishop of Cloyne, and late Fellow of Trinity College, for that purpose.

Vice-Chancellor's Latin Medals.—On the 30th of January, 1869, it was resolved by the Provost and Senior Fellows to establish an annual examination in Latin, similar to that held for the Berkeley medals in Greek, and subject to the same regulations. Two *gold medals*, called "The Vice-Chancellor's Latin medals," are given to the successful candidates. The examination is held annually in Michaelmas term, on a day named in the University Almanack.

Prizes in Composition and Philology.—Vice-Chancellor's prizes: The following resolutions, approved of by the Vice-Chancellor, have been adopted by the Board, with reference to the Vice-Chancellor's prizes:

That four Vice-Chancellor's prizes for Composition be given in each year, viz., for the best Compositions on proposed subjects, in English Prose, English Verse, Greek or Latin Prose, and Greek or Latin Verse.

That the amount of each prize be £20.

That these prizes be open to all students under the standing of M.A., having their names on the College books.

That, in case of remarkable merit, arrangements be made for a public recitation of the compositions.

That the prize in each of the above departments be not awarded to any student oftener than twice in succession, or than three times during his College course.

That the subjects for the above compositions be announced, on or before the 1st of June, in each year; that the compositions, with fictitious signatures, be sent in to the Senior Lecturer, on or before the 1st of December; and that the prizes be declared on the 1st of January following.

The Ferrar Memorial Prize.—At a meeting of the subscribers to the Ferrar Memorial Fund, held in Trinity College, on Wednesday, the 11th of November, 1874, it was resolved (*inter alia*):

That the subject of examination for the prize be a course of Comparative Philology, to be fixed from time to time by the Board of Trinity College, and duly announced in the University Calendar for each year.

That the competition for the prize be open to all under the standing of M.A. (not Fellows of the College, or Professors of the University), whose names shall be on the books of Trinity College during the day or days of examination.

That successful competition for the prize in any year shall preclude the successful candidate from competition for it again in any subsequent year.

The examination for the Prize is held in Trinity term. The value is £14.

The Tyrrell Memorial Prize.—At a meeting of the subscribers to a fund for establishing a memorial in memory of the late W. G. Tyrrell, held on the 20th October, 1877, the following resolutions were unanimously agreed to, and were sanctioned by the Board, December 1, 1877:

1. That the prize be a Biennial Gold Medal, to be awarded for the best translations of passages into the four kinds of Classical Composition.

2. That the passages for the compositions be announced on or before the 1st of June in each alternate year; the compositions, with fictitious signatures, to be sent to the senior lecturer on or before the 1st of February following.

3. That the competition be open to all students under the standing of M.A., having their names on the College books.

The funds available, after the deduction of the necessary expenses, amounting to £128, have been handed over to the Bursar, for the purpose of instituting the prize. As the die for the medal has to be paid for, the awarding of the medal will be suspended for a few years.

Prize in Mental and Moral Science.—The Wray prize: The interest of £500. Students in the Senior Sophister Class are alone admissible as candidates. The examination is held in Hilary term, on a day of which notice is given. The *course for examination* is as follows: (1) All the Logic and Metaphysics of the Senior Freshman and Junior Sophister years; (2) Bain, "Senses and Intellect" (8vo edition), the Second part on the Intellect, and the Appendices; (3) All the Works of Bishop Butler, except the Sermons on Public Occasions.

Prize in Experimental Science.—Ekenhead scholarship: This scholarship, which is open to natives of the county of Antrim only, will be awarded to the best answerer (provided that sufficient merit be shown) at an examination in Elementary Physics and Chemistry, to be held in the Trinity term of every third year. Candidates must have their names on the College Books, and must not have passed the examination (Moderatorship or General) for the Degree of A.B.

Prizes in History and Political Science.—Cluff Memorial prize: The Cluff Memorial prize is given to the best answerer at an examination held in Hilary term, in every alternate year. The subject is a portion of Mediæval or Modern History, changeable from year to year, to be

studied in the original authorities. The examination is open to all persons having their names on the College Books. The sum of £200 having been paid to the Bursar by the subscribers to the Cluff Memorial prize, the Board of Trinity College have agreed that the amount of the prize shall be £16 every alternate year.

Prizes in Political Economy.—In the year 1837, the Provost and Senior Fellows resolved to institute an annual examination in Political Economy, and to offer prizes, one of £10, and a second of £5, for proficiency in that science. The examination is held in Trinity term; it is conducted under the direction of the Professor of Political Economy, partly *vivâ voce*, and partly by written questions. Students in the Bachelor Classes only, having their names on the College Books, are permitted to offer themselves as candidates. No candidate who has once been awarded either of the prizes can obtain a premium a second time. The following is the course examined in: The course prescribed for Moderatorships, with the addition of—Ricardo's "Principles of Political Economy and Taxation;" J. E. Cairnes's "Essays in Political Economy;" Bagehot's "Lombard Street;" "The Cobden Club Essays," second series, 1872; Thornton "on Labour." *Whately Memorial prize:* The amount of the prize will, in future, be about £55, awarded every five years.

Prizes in English.—Vice-Chancellor's prizes in English: The rules with respect to the Vice-Chancellor's prizes in English Prose and English Verse have been given already under "Prizes in Classics." *Prize in Early English:* With a view to encourage the study of Early English, the Committee of the Early English Text Society have resolved to place annually at the disposal of the Professor of English Literature two years' sets of their publications, to be given as a prize for distinguished proficiency in that subject. The prize is open to all students. The date of the examination is fixed by the Professor of English Literature. *New Shakspere Society's prize:* In the year 1875, it was resolved by the Board and Council:

That the New Shakspere Society's prize be given in each year for the best original contribution to the study of Shakspere, by any student of Trinity College under the standing of M.A.; that any essay read before the University Shakspere Society may be used in competition for this prize, if handed in to the chairman on the evening on which the essay has been read; that the prize be not awarded to any student oftener than once; that the examiners be the Professor of English Literature, and another examiner to be appointed by the Board; that the essays competing for the prize of the preceding year be sent in to the Senior Lecturer, on or before June 1st.

Prizes in Oriental Languages.—Hebrew, Chaldee, and Syriac prizes:

Prizes to graduates, for the encouragement of the study of Hebrew, were first instituted by a decree of the Board, dated February 22, 1794, and a fund set apart for the purpose. In the year 1800 this fund was considerably augmented by the munificence of Primate Newcombe, and the grant was continued by his successors in the See of Armagh, until the year 1871, when it was withdrawn, in consequence of the disendowment of the Church of Ireland. In the year 1874 it was decreed by the Board that a sum not exceeding £40 should be given annually for prizes in Hebrew, Chaldee, and Syriac. All students are now permitted to attend Hebrew lectures, and the professor is authorised to give a certificate for one year's attendance. An annual examination is appointed to be held, at the end of each year, in Trinity term, and Hebrew premiums are awarded to the best answerers at this examination. For the subjects and regulations of this examination, *vide* "Divinity School."

Prizes in Arabic, Persian, and Hindustani.—The Provost and Senior Fellows have founded an annual prize of £10 for proficiency in Arabic. An examination will be held annually in Trinity term, of students wishing to compete for the above prize. No student will be admitted to this examination unless he has studied under the Professor of Arabic for at least three terms. An annual prize of £5 will also be given, under similar conditions, for proficiency in Hindustani or Persian.

Miscellaneous Prizes in Languages.—Prize in Sanskrit: An annual prize of £5 is given for proficiency in Sanskrit, under conditions similar to those which hold good in reference to the prizes in Hindustani and Persian. *Prizes in Irish*: For the encouragement of the study of the Irish language, the Board have placed the sum of £20 at the disposal of the Professor of Irish, to be given in premiums to such students as shall distinguish themselves in the Irish Language. The examination is held in Trinity term, on a day named in the Calendar. *Prizes in Italian and in Spanish*: Examinations for prizes in Italian, and for prizes in Spanish, are held annually, usually in Trinity term, when a first and a second prize in Italian, and a first and a second prize in Spanish, are awarded, if sufficient merit be shown. The prizes are open for competition to all undergraduates, but can be obtained only once by any candidate. Candidates are required to give one week's previous notice to the Senior Lecturer, stating the language or languages in which they desire to compete. The following *courses* have been appointed: *Italian*: Alfieri, Saul, Bruto Secondo, Agide; Manzoni, I promessi Sposi (chaps. i.—xii.); Dante, Il Purgatorio, cantos 1—20. *Spanish*: Calderon, La vida es sueno, Il magico prodigioso; Cervantes, Don Quixote, part i.; F. Caballero, La Gaviota.

Exhibitions.

Exhibitions at Entrance: Twelve *exhibitions* of £25 a year each, tenable for two years, are awarded in each year to students in the rising Junior Freshman Class who have entered within the year, provided sufficient merit be shown by the candidates. They are called the Junior exhibitions. The examinations are held annually, in Michaelmas term, on days notified in the University Calendar. No student is allowed to be a candidate who has completed his nineteenth year before the 1st of November immediately succeeding the commencement of the examination. All students intending to compete for these exhibitions must forward their names, and a certified copy of their baptismal registry, or other satisfactory evidence of age, to the Senior Lecturer, at least three days before the commencement of the examination. No student holding a Royal scholarship, Supplemental Erasmus Smith exhibition, or Foyle College exhibition, is entitled to hold one of these exhibitions. An exhibitioner losing his class in College, or not keeping his name on the College books, will forfeit his exhibition. Any grave violation of College discipline will subject the holder of an exhibition to forfeiture. The *examination* is in the following subjects: *Classics* (100 marks): Portions of three Greek authors, for *vivâ voce* translation, 25; portions of three Latin authors, for *vivâ voce* translation, 25; paper of unseen Greek and Latin passages, 20; Ancient History and Geography, 10; Greek and Latin Prose Composition, 20. *Science* (100 marks): Arithmetic, 15; Algebra, to the end of quadratic equations, 30; six books of Euclid, with easy deductions, 30; Plane Trigonometry, 25. *English* (30 marks). *French* or *German* (20 marks). The exhibitions will be paid half-yearly, through the tutors of the respective students, at the close of the June and December quarters—the first payment to be made at the close of the December quarter next following the day of election. *Exhibitions at the close of the Second year*: Twelve *exhibitions* of £25 a year each, tenable for two years, are awarded in each year to students who have passed the Michaelmas examination at the close of the Senior Freshman year.

Exhibitions to which appointments are made by the Board without Examination: The exhibitions to which students are appointed by the Board, generally without a preliminary examination, are as follows:

20 Erasmus Smith exhibitions, first class.
15 Ditto, second class.
10 Stearne exhibitions.
5 Downes exhibitions.
12 Worrall exhibitions.
6 Crowe exhibitions.
2 Avary exhibitions.
1 Clanbrassil exhibition.
1 Span exhibition.
1 Parsons exhibition.
1 Yelverton exhibition.
1 Griffith exhibition.
1 Briggs exhibition.

Erasmus Smith exhibitions: These are tenable until the student becomes of Master's standing. Students elected by competitive examination from the four schools of Drogheda, Ennis, Galway, and Tipperary, are entitled to priority in appointment to these exhibitions; and those not so filled are disposed of by the Board. The annual value of a first-class Erasmus Smith's exhibition is £7 7s. 8d., and of a second-class ditto, £5 10s. 9d. *Downes exhibitions*: The Downes exhibitioners are selected, in accordance with the will of the founder, as expressed in the following passage of his will*:

> I leave fifty pounds annually, to be given among five students on the Divinity line, in the proportion of £10 each, at the discretion of the Provost and Senior Fellows, respect being had in such choice to narrow circumstances, and proficiency in learning; the said stipend to continue till they shall arrive to the standing of A.M., or shall die, resign, or leave College, and then to cease, and others to be appointed in their room; and to be determinable sooner in case of immoral behaviour, negligence in attending the Divinity lectures, or incapacity in such students, certified by the Divinity Lecturer.

The annual value of each exhibition is £10 *Irish*, or £9 4s. 8d. present currency. *Worrall exhibitions*: The Worrall exhibitioners, in accordance with the will of the founder, are chosen by the Board from poor scholars, the sons of clergymen of the diocese of Dublin, or, in default of such, the sons of freemen of the city of Dublin. The annual value of each exhibition is £9 4s. 8d. When an exhibition is declared to be vacant the tutors are invited to state to the Board the names of their pupils having the qualifications required by the founder's will, and such other circumstances as may guide the Board in their selection. *Crowe and Clanbrassil exhibitions*: These exhibitions are limited to students nominated by the representatives of the founders. The annual value of each of the former is £15, and of the latter £7 7s. 8d. On the 28th March, 1874, a deed of grant of the right of presentation to the Crowe exhibitions, by the Rev. Robert Blundell to the Provost, Fellows, and scholars of Trinity College, from and after the decease of the said Robert Blundell, was laid before the Board. The annual income arising from the endowment of the Crowe exhibitions having increased sufficiently to allow of an augmentation of their number, an agreement was entered into between the Provost and Senior Fellows and the Rev. Robert Blundell, who now has the nomination to the exhibitions, whereby four exhibitions are added to the two heretofore existing, and the amount of all made £15 of the present currency. The exhibitions to be given to "Sons of clergymen of the Church of Ireland (giving

* College Register, p. 3, 1784.

the preference to sons of clergymen of the diocese of Tuam) intending to devote themselves to the ministry of the Church of Ireland," such exhibitions to be given as a rule to students at the commencement of their Divinity course, and in all cases taking into account the poverty of the respective candidates. *Span and Avary exhibitions*: These exhibitions are specially limited by the wills of the founders to poor students. The annual value of the former is £46 3s. 1d., and of each of the latter £4 12s. 4d. The period for which the Span exhibition may be held is indefinite, and the exhibitioner is selected by the Board from general collegiate merit. The Avary exhibitioners are nominated by the Provost from among the sizars. The *Stearne, Parsons, Yelverton, Griffith*, and *Briggs exhibitioners* are selected by the Board for general collegiate merit, the preference being generally given to scholars on the foundation. The annual value of each is £4 12s. 4d. All the foregoing exhibitions (except the Span exhibition) are vacated when the holders arrive at Master's standing. *Exhibitions awarded to scholars*: On the 1st May, 1875, the following decree was enacted by the Provost and Senior Fellows, with the consent of the Visitors:

Whereas certain exhibitions of small value exist at present in the College, to which students are appointed by the Provost and Senior Fellows:

It is decreed that any scholar who shall obtain Senior Moderatorship at the Degree examination shall be awarded one of these last-mentioned exhibitions, if such shall be then vacant, and such further exhibition as shall raise the entire annual value of his exhibition to £10; provided, however, that no such exhibition shall be given to any Senior Moderator who obtains one of the studentships at the Degree examination.

Royal Scholarships or Exhibitions Founded by the Commissioners of Education in Ireland.

The Commissioners of Education in Ireland have founded exhibitions, called "Royal Scholarships," for students who shall enter Trinity College from the Royal Schools of Armagh, Dungannon, Enniskillen, or Cavan. One scholarship of £40 per annum, and one of £30, will, if sufficient merit be shown, be awarded in each year to candidates from Armagh, Dungannon, or Enniskillen; and one of £25 to candidates from Cavan Royal School. These scholarships can be obtained by such students only as have been three years in all, previously to their entrance into Trinity College, pupils in some one or other of the Royal Schools. It is not, however, hereby intended to prevent pupils from moving from one of these schools to another; but the scholarships founded for the respective schools of Armagh, Dungannon, Enniskillen, and Cavan, can be obtained only by students who have entered the

University from the schools for which such scholarships have been founded. The scholarships are tenable for four years, subject to certain conditions hereafter mentioned. The Provost and Senior Fellows appoint examiners in each year, to examine, on the first convenient day after the Second Entrance in the month of October, such students as have entered from the said four Royal Schools, and shall offer themselves as candidates for these scholarships. *Midleton School*: The Commissioners of Education in Ireland will grant annually two *prizes*, one of £30 and one of £20, to such Junior Freshmen as shall, subject to the rules prescribed for the Royal Schools, have entered Trinity College, Dublin, from Midleton School, and, having been examined along with, and in the same course as, the candidates for the Royal scholarships, shall be recommended by the examiners as deserving candidates.

Foyle College Exhibitions.

The Honourable the Irish Society of London for the Plantation of Ulster has instituted five *exhibitions*, of £30 a year each, to be enjoyed by students of Trinity College who have been previously educated at Foyle College, Londonderry. The candidates for these exhibitions are examined along with the candidates for Royal scholarships in the same course, and a return is made to the Governing Body in the same manner as to the Commissioners of Education, reporting on the positive merit of the candidates, and arranging them according to their answering, without distinction of schools. The most meritorious Derry candidate on the face of the return obtains the exhibition, provided the merit shown is sufficient. A power is reserved by the Governing Body of suspending or diminishing the exhibitions, if sufficient merit has not been shown by the candidates. These exhibitions can be obtained by such students only as have been three years, or at least (under very particular circumstances, subject to the consideration of the Governing Body) one year and a-half, previous to their entrance into Trinity College, pupils in Foyle College, and have remained at it till the October Entrance Examination immediately preceding the examination for exhibitions. Students, when appointed to these exhibitions, may retain them for five years from the time of their election, provided that, proceeding regularly with their respective classes, they obtain in each year of their undergraduate course one honour of the first rank, or two honours of the second rank (honours being reckoned as in the case of Royal scholarships); a power of dispensing with this condition being reserved to the Governing Body, when satisfied with the effort and positive merit of the person holding the exhibition. The exhibitions become due and are payable half-

yearly; but in the event of a student not qualifying in the first half of the year to retain his exhibition, the payment in respect of same is held over until the ensuing half-year, when payment for the entire year will be made, if in the meantime all the requisites for the entire year have been fulfilled. An exhibition becomes forfeited by the holder of it incurring any heavy collegiate censure, such as public admonition or rustication. The residue of exhibitions lapsing by forfeiture (from any cause) are competed for at the next examination, and held in the same manner as exhibitions lapsing naturally.

Musical Exhibitions.

With the object of encouraging the study and practice of Sacred Music in Trinity College, the Board have founded Musical exhibitions. The exhibitioners are chosen by examination, and (in general) from students in the Junior Freshman class. At this examination the candidates are tested both as to their theoretical knowledge of Music, and as to their fitness to take part in the choral service of the chapel. The examination is held in June each year, and is conducted by the Professor of Music, and one or more Fellows appointed by the Board. An exhibitioner holds his place for two years, with a power of re-election for such further time as may be determined by the Board. Musical exhibitioners to be hereafter * elected, who are certified to the Bursar, by the Precentor, as having attended diligently, during any half-year ending on March 25, or September 25, are entitled to a salary at the rate of £10 per annum, for such half-year. It is the duty of the exhibitioners to assist in the choral service of the College Chapel, and to attend the rehearsals appointed for the purpose. For neglect of such duty they are liable to a pecuniary fine. Upon the recommendation of the examiners, other students who undertake to attend one rehearsal during the week are at liberty to take part in the choral service of the chapel, and have seats assigned to them behind the choir. In case of any exhibitioner resigning, or being removed from his exhibition for neglect of duty, the Precentor shall nominate one of the students recommended at the previous examination to fill the vacant exhibition, until a new election takes place.

Professional Schools.

There are four Professional Schools in the University, viz.: Divinity, Law, Physic, and Engineering. The testimonials or licences of these Schools can only be obtained by attending prescribed courses of lectures during two or more years, and passing a final examination.

* May 5, 1877

The regulations relating to the keeping of terms, the course of study, and the qualifications for the final examination, in each of these four departments, will be found under the several heads. Students seeking credit for a term by lectures must, at the commencement of such term, duly register with the Clerk of the Books their places of residence for that term, and during term notify a change of residence: if this rule be not observed, credit for the term cannot be allowed.

Divinity School.

ADMISSION OF STUDENTS.—On the 22nd April, 1876, and at a previous meeting, it was resolved by the Provost and Senior Fellows:

That all students shall be admitted to the lectures of the Divinity School without being required to pursue the course in Arts, provided that candidates proposing to join the Divinity School before the beginning of their Junior Sophister year shall be required to make application to the Regius Professor of Divinity, at least a month before the beginning of the lectures of the term in which they propose to join, stating the grounds on which they claim to be permitted to do so. If these shall be found satisfactory, a time will be appointed for passing an examination under the direction of the Regius Professor of Divinity and Archbishop King's Lecturer, in the following subjects:

CLASSICS.

Any two Greek and any two Latin authors, to be selected by the candidate, who will be examined particularly as to his grammatical acquaintance with the languages.

METAPHYSICS AND MORAL PHILOSOPHY.

An acquaintance with Locke's Essay on the Human Understanding and with Stewart's Outlines of Moral Philosophy will be required as a minimum.

MATHEMATICS.

A knowledge of Euclid's Elements and of Algebra as far as simple equations will be required as a minimum.

On the 8th July, 1879, it was resolved by the Provost and Senior Fellows:

That in and after Michaelmas term, 1880, students under Senior Sophister standing who propose to join the Divinity class will be required to pass a Preliminary examination in Latin Composition; Greek Grammar, in addition to the portion of the Greek Testament appointed for examination on the first day of the term in which the class is joined; Murray's Logic, and the Selections from Locke at present appointed in the Ordinary course for the Senior Freshman year.

Terms.—Students in Divinity must keep six terms—three with Archbishop King's Lecturer in Divinity, and three with the Regius Professor. It is necessary, in general, for Divinity students to get credit for all the lectures except one, in order to save each term. In

the case of sickness, or some other inevitable impediment, the omission of a number of lectures, not exceeding one-fourth of the whole, is allowed.

Junior Divinity Year.—During the first year, which, without Preliminary examination, may be the Senior Sophister year of the Undergraduate course, students attend the lectures of Archbishop King's Lecturer in Divinity, together with the lectures of one of his assistants. Archbishop King's Lecturer in Divinity lectures during the Michaelmas and Hilary terms, on the Evidences of Natural and Revealed Religion; and in Trinity term, on the Socinian Controversy. His lectures are delivered on Mondays and Thursdays, at eleven o'clock. His assistants lecture on the same days, at one o'clock. Three days (not ordinary lecture days) are appointed in each term for English Composition; and attendance on two, at least, of these days is necessary for keeping the term. A *premium* is granted by the Board in each term to the student who sends in the best composition, if recommended by Archbishop King's Lecturer. (*Vide infra*, "Divinity Composition Premiums.") On the first lecture day of each term, students are examined in a portion of the Greek Testament; on the first day of Michaelmas term, in the Acts of the Apostles; on the first day of Hilary term, in the Epistle to the Galatians; and on the first day of Trinity term, in the Epistle to the Ephesians. They are also required to pass in Latin Prose Composition. Students who absent themselves on the first lecture day of term must attend to be examined in the prescribed portion of the Greek Testament, during the general Divinity examination, held at the end of the term. On the first lecture days of Hilary and Trinity terms an *examination* is held in the following subjects, *in addition* to the portions of the Greek Testament just mentioned: *Hilary term*—Robertson's History of the Christian Church, vol. i., 2nd edit., book i., chaps. iv.—vii.; book ii., chaps. i., ii. *Trinity term*—Robertson, book ii., chap. iv. (A.D. 363-381), chaps. viii., ix., x. (*S. Augustin, Donatism; Pelagianism; Nestorianism; Eutychianism*—Advance of the Roman See.) It is necessary to pass one, at least, of these term examinations, in order to be entitled to appear at the examination which completes the Junior Year.

The following are the *subjects of the course* lectured in by the assistants to Archbishop King's Divinity Lecturer. *Michaelmas term*: St. Luke's Gospel, in Greek, as the basis of criticism—grammatical and exegetical. *Hilary term*: St. Paul's Epistle to the Romans, in Greek. *Trinity term*: Bishop Pearson on the Creed, Articles i., ii., and viii. No Divinity student can attend the lectures of the Senior year until his attendance upon the Junior year is completed. To com-

plete the Junior year, it is necessary, in addition to the attendance upon the lectures of Archbishop King's Divinity Lecturer and his assistants, to pass an examination, which is conducted according to the following rules: The examination is held at the end of Trinity term, for all Divinity students who have attended and obtained credit for the three preceding terms of the Divinity Lectures of the Junior year. No student is allowed to present himself at this examination until he has satisfied Archbishop King's Lecturer that he has made reasonable proficiency in Latin Composition. Archbishop King's Lecturer is empowered to call on his assistants to take a part in conducting the examination. A similar examination is held at the end of the Michaelmas and Hilary terms, for supplementalists who have completed their attendance on Divinity Lectures in those terms, respectively. In rejecting a candidate, the examiners determine whether he is to present himself again at either of the Supplemental examinations, or to be kept back until the next annual examination. The *course for the examination* is as follows: *Holy Scripture*: The four Gospels and Acts of the Apostles. *Greek*: The four Gospels and St. Paul's Epistle to the Romans. *Evidences*: Paley's Evidences; Butler's Analogy; Lee's Lectures on Inspiration, lectures i., iv., vii., and Appendices B, C, D, K, O, P, Q. *Socinian Controversy*: Pearson on the Creed, Arts ii. and viii.; Magee on the Atonement, the Discourses and the Dissertations to No. L., inclusive. *Ecclesiastical History*: The selections from Robertson appointed for the Hilary and Trinity term examinations. *Latin Composition*: A subject for composition, and a paper of questions on the subjects of the public prelections, are also proposed to the candidates at this examination. An additional examination for *prizes* (attendance on which is not compulsory) is held in Trinity term. *Vide infra*, "Prizes."

Senior Divinity Year.—During the second year, the students are required to attend the Regius Professor of Divinity, and one of his assistants. The professor lectures on the Criticism and Interpretation of the Bible, the Controversy with the Church of Rome, and the Articles and Liturgy of the United Church of England and Ireland. The Regius Professor of Divinity lectures on Tuesdays and Fridays, at eleven o'clock. His assistants lecture on the same days, at one o'clock. The assistants lecture on the following subjects: *Michaelmas and Hilary terms*: The Thirty-nine Articles, with Commentary, as appointed for the Final examination. *Trinity term*: The portions of the Greek Testament appointed for the Final examination. Two days (not ordinary lecture days) are appointed in each term for English Composition; and attendance on one, at least, of these days is necessary for

keeping the term. A *premium* is granted by the Board in each term to the student who sends in the best composition, if recommended by the Regius Professor. (*Vide infra*, "Divinity Composition Premiums.") On the first lecture day of each term students are *examined* in a portion of the Greek Testament; on the first day of Michaelmas term, in the two Epistles to Timothy and the Epistle to Titus; on the first day of Hilary term, in the First Epistle to the Corinthians; and on the first day of Trinity term, in the Epistle of St. James and the two Epistles of St. Peter. Students who fail to pass a satisfactory examination in the appointed course of Greek on the first day of term will be required to attend lectures in Greek during term, in addition to the ordinary Divinity lectures. On the first lecture days of Hilary and Trinity terms, an examination is held in the following subjects, *in addition* to the portions of the Greek Testament just mentioned: *Hilary term*: Robertson's Church History, book iii., chaps. vi., viii.; book iv., chaps. i., ii., iii. (Ireland and England), iv., vii., ix.; book v., chap. i. (Image-Controversy), chap. ii. (Doctrinal Controversy), chaps. iii., viii., ix.; book vi., chaps. ii., v., vii., viii. (Nominalism, Roscelin, Abélard); Bishop H. Browne's Commentary on Articles vi., xxii., xxviii. *Trinity term*: Robertson's Church History, book vi., chaps. xii., xiii.; book vii., chap. i. (sections 8, 9), chaps. v., viii.; book viii., chaps. v., vi., viii., xi. (section 3); book ix., chaps. ii., v., viii. Potter's Discourse on Church Government, edited by the Rev. J. C. Crosthwaite, chaps. i.-iv. Procter on the Book of Common Prayer, part i. It is necessary to pass one, at least, of these term examinations, in order to qualify for the Final examination.

This *Final examination* is held at the end of Trinity term, for all students who have attended and obtained credit for the three preceding terms of the Senior Divinity year, and have complied with the foregoing regulations. A similar examination is held at the end of the Michaelmas and Hilary terms, for supplementalists who have completed their attendance on Divinity Lectures in those terms respectively. Students are required to give notice to the Regius Professor of their intention to present themselves at the Final Divinity examination. This notice must be given one week before the day of examination. The examination is conducted by the Regius Professor and his assistants; and the Professor of Ecclesiastical History takes part in the examination in his own department. Those students who have passed the examination are arranged in three classes, according to their respective answering. Students who come out in the first class receive a special Honorary Certificate, in addition to the usual Divinity Testimonium. The course appointed for this examination is as follows: *Holy Scripture*: The

Bible in the Authorised Version. *Hebrew*: (See the Regulations below). *Greek*: St. Paul's Second Epistle to the Corinthians, and the Epistle to the Hebrews. *Ecclesiastical History*: The portions of Robertson appointed for the Hilary and Trinity term examinations. Hardwicke's Reformation—Introduction, chap. i. (Germany); chap. ii., (Switzerland); chaps. iv. and vi., chap. viii. (Roman Communion, English Communion). *Liturgy and Church Government*: The Book of Common Prayer, with Proctor's Commentary; the selection from Potter appointed for the Trinity term examination. *Articles of Religion*: Articles i.—xvi., and Articles xxii., xxviii., with Bishop H. Browne's Commentary; Article vi. and Article xvii. to end, with Bishop Burnet's Commentary. *Hebrew*: It was ordered by the Board, on November 23, 1859, that Hebrew shall form part of the course prescribed for the Final Divinity examination, according to the following regulations: (1) Those students who have passed one or more examinations with the Regius Professor of Hebrew shall not be re-examined, but shall receive such marks as the Professor of Hebrew shall have awarded them. (2) Other students shall be examined in the following course: Genesis, chaps. i. to iv., and xii. to xv.; De Burgh's Hebrew Grammar. (3) Answering in this course is to be estimated after the same manner as in the other subjects of the examination. (4) A special certificate shall be given to such students as shall have answered creditably in Hebrew at the Final examination, and have not previously obtained the Professor of Hebrew's certificate. A subject for English Composition, and a paper of questions on the public Prelections of the Regius Professor, are also proposed to the candidates at the Final Divinity examination. When attendance upon the whole Divinity course has been thus completed, the Divinity testimonium is given in the following form:

Testamur A.B. per biennium sedulo interfuisse Prælectionibus atque Examinationibus in Sacra Theologia per leges Academicas requisitis.

——— *Professor Reg. in Sacr. Theol.*

E Coll. SS. Trin. juxta Dublin.

——— *Prælector in Sacr. Theol.*

An annual examination is held by the Regius Professor, at the close of Hilary term, at which *exhibitions* are awarded for distinguished answering. Attendance on this examination is not compulsory. For the regulations and subjects of this examination, *vide infra*, "Prizes." After the year 1880, the names of Divinity students who are graduates will not be struck off the College Books in June quarter, until after the Final examination of the Regius Professor of Divinity. Students in

Divinity are required to receive the Sacrament of the Lord's Supper at least three times in each year of their attendance on lectures.

In addition to the foregoing lectures, which are compulsory upon all Divinity students, *instruction* is also given upon various subjects in connection with the Divinity School. These courses of lectures are as follow: (1) Hebrew; (2) Biblical Greek; (3) Ecclesiastical History; (4) Irish. The hours of lecture in these departments are so arranged as not to interfere with those of the Divinity Professors and their assistants. Students are thus enabled to complete their attendance upon any or all of these courses during the period of their ordinary Divinity studies.

In July, 1853, the following order was made by the Board: "The several professors connected with the Divinity School, viz., the Professors of Biblical Greek, of Ecclesiastical History, and of Irish, are authorised to grant *certificates* of attendance on their respective courses to graduates who have obtained the Divinity testimonium, and to them only."

PRIZES.—*Theological Exhibitions*: For the further promotion of theological learning, the Board of Trinity College, with the consent of the Visitors, on the 18th of December, 1858, founded *Theological exhibitions*, in place of the prizes formerly known as the Divinity Professor's premiums. The *examination* for these exhibitions is held each year at the end of Hilary term, on the days stated in the University Almanack. To the best answerers at this examination two exhibitions are given, one of £60, and one of £40 per annum, provided the answering be deemed satisfactory by the examiners. Each of these exhibitions is tenable for a period not exceeding three years. Candidates for these exhibitions must not be of more than one year's standing as M.A., reckoned from the Michaelmas examination of the Senior Freshman year; they must have completed the six terms of the Divinity curriculum; and they must present themselves at the examination immediately subsequent to the term in which they have completed their Divinity course. No person can offer himself as a candidate a second time. The Exhibition examination, if passed creditably, will reckon in lieu of the General Divinity examination.

Archbishop King's Divinity Prizes.—These prizes were founded by the Board in the year 1836. They are called Archbishop King's Divinity prizes, because they are given at an annual examination held by Archbishop King's Divinity Lecturer. This examination is held in Trinity term; and such students only can be candidates for the prizes as are selected by the examiners at the general Divinity examination. The subjects of the course examined in for the prizes, in addi-

tion to that appointed for the general Divinity examination (*vide ante*) are as follow: *Greek*: The Four Gospels; the Acts of the Apostles; the Epistles to the Romans, Galatians, Philippians, Ephesians, Colossians; Harmony of the Gospels; Paley's Evidences and Horæ Paulinæ; Butler's Analogy; Davison on Prophecy; Pearson on the Creed, Articles ii., iii., iv., v., viii., ix., xii.; Magee on the Atonement, except Nos. 53, 59, 69, and Postscript, 72, and the Appendix with its Postscript; MacDonnell's Donnellan Lectures—Appendix to Lecture i.—Lecture iii. and Appendix—Lecture iv. and Appendix, and Lecture v.; Robertson's Ecclesiastical History, A.D. 64—590. *Composition:* Two *prizes*, one of £12 and the other of £8, are given to the best answerers (if sufficient merit be shown by the candidates); and *certificates* to such as answer sufficiently. *Extra prizes* are also frequently given on the recommendation of the examiners. The certificate cannot be given to any student until he has completed his whole Divinity course, and obtained the Divinity testimonium.

Bishop Forster's Divinity Premiums.—In the year 1738 the sum of £200 was given to the College by the Right Rev. Nicholas Forster, D.D., Lord Bishop of Raphoe, sometime Senior Fellow of Trinity College, Dublin, on condition that it should be applied to the purpose of encouraging the study of Theology, in connection with the lectures of Archbishop King's Lecturer in Divinity. When the office of Archbishop King's Lecturer was placed on a new foundation in the year 1836, the endowment of Bishop Forster was included in the prizes then instituted by the Board, for the Junior Divinity class. The fund, along with the unappropriated balance of interest, is now separately invested; and the sum of £16 is distributed in *premiums* to the two best answerers in the subjects of the lectures of Archbishop King's Lecturer, at the General examination of the Junior Divinity class, if sufficient merit be shown by the candidates.

Dr. Downes' Divinity Premiums.—In the year 1797 these premiums were established out of a fund bequeathed to the College for the purpose by the Rev. Dr. Downes, of Waterford. The original regulations concerning these prizes, made July 4, 1797, were modified by the Board in April, 1834, and in July, 1879. The prizes are for written compositions for an *extempore* discourse, and for reading the Liturgy. In these branches the examinations are held, respectively, on three separate days in Trinity term, of which notice is given in the University Almanack, and by advertisement on the College gate. The examiners appointed in Dr. Downes' will are the Regius Professor of Divinity, Archbishop King's Lecturer in Divinity, the Professor of Oratory, and the Professor of Moral Philosophy, with the assistance,

in the case of written compositions, of the Provost and such of the Senior Fellows as may choose to attend. The subjects are selected by the examiners, and the subject for written composition is announced, in the last week of Hilary term, by the Regius Professor of Divinity. To become a candidate in any of the three departments it is necessary that the student should have been a student in Divinity during the two terms antecedent to that in which the examinations are held. (1) *Premiums for Written Composition*: In the trial for this prize, the candidates deliver discourses on the proposed subject without hesitation, each discourse not to exceed one quarter of an hour in delivery; they are expected to be able to recite their compositions; and a premium of £20 is adjudged to the best, and £10 to the next best, or such inferior premiums as they shall appear to merit, regard being had as well to the manner of pronouncing such discourses as to the matter of them; and no candidate can be entitled to either of the premiums oftener than three times. (2) *Premiums for extempore speaking*: To the student who shall deliver the best discourse *extempore* on a proposed subject the examiners adjudge a premium of £12, and to him delivering the next best £8, or such inferior premiums as shall appear to be deserved; and no candidate is entitled to obtain either of these premiums oftener than three times. (3) *Premiums for reading the Liturgy*: Two premiums, one of £8, the other of £4, or such inferior premiums as shall appear to be merited, are adjudged to such students as shall read in the best manner the parts of the Liturgy which shall be proposed to them. No candidate can, in this department, obtain either of the premiums a second time.

Church Formularies Prize.—An annual prize of £10 was founded in the year 1868 by the Right Hon. Richard R. Warren, late M.P. for the University, in order to encourage the study of the Creeds and Articles of the Church.

Divinity Composition Premiums.—The Regius Professor of Divinity and Archbishop King's Lecturer recommend to the Board, in each of the three terms of the Divinity year, the names of those students in the Senior and Junior classes, respectively, who have sent in the best written compositions on subjects proposed to the class during the terms, and whom they deem worthy of encouragement. To these students premiums of £2 are awarded.

Bedell Scholarships.—The Committee of the Irish Society, with the sanction of the Provost and Senior Fellows of Trinity College, have founded two scholarships in the University, denominated the Bedell Scholarships, and placed them under the superintendence of trustees named by the founders. The scholarships are designed for such

students only as give reasonable hope that they will be competent on their ordination to preach in the Irish language. One scholar is elected whenever a vacancy takes place. The regulations are as follow:

(1). The value of each scholarship shall be £20 per annum, payable half-yearly, in the last weeks of October and April.

(2). An examination of candidates shall be held annually, as soon after the Trinity term examination as possible, on a day to be fixed by the Trustees, in conjunction with the Professor of Irish.

(3). The scholarships shall be open to students of any standing in the University, unless they be Irish sizars; and shall be tenable by them for four years, if they shall keep their names so long on the College books, and have not been admitted to Holy Orders.

(4). They shall be required to reside in or near Dublin, and to attend the lectures of the Professor of Irish (if not specially exempted by the Trustees of this fund); and to attend also Divinity lectures, when of sufficient standing.

(5). They shall be required to pass an annual examination, at the commencement of Michaelmas term, in the Irish language. The subjects of this examination to be fixed by the Trustees, in conjunction with the Professor of Irish.

(6). On the day of payment in April the scholars shall produce to the Trustees, or their secretary, a certificate from the Professor of Irish that they have satisfactorily passed the above-mentioned Annual examination in Irish; they shall also obtain from their College tutors, and at the same time present to the Trustees, or their secretary, a certificate of the judgments and honours, if any, which were given to them at the Term, Catechetical, and Divinity examinations, during the previous year.

(7). On failure of any of these conditions the payment then due shall be withheld; and on a second failure the scholarship shall become void.

(8). The names of the candidates and their qualifications shall be returned, after the examination, to the Trustees, in whom the election shall be vested.

At the examination for the Bedell scholarship the best answerer of the unsuccessful candidates, if recommended by the Professor of Irish, obtains a prize of £10. The following *subjects* have been appointed for the *examination* for the Bedell scholarship: (1) Irish Grammar; (2) Translation of the Gospels from Irish into English and *vice versâ*; (3) the Lord's Prayer, Creed, and Ten Commandments, in Irish, by heart; the Creed proved from Scripture; (4) the Thirty-nine Articles proved from Holy Scripture; (5) Composition. *Annual Examinations—First year*: (1) Translation of the Pentateuch; (2) Church Catechism in Irish by heart, and proved as above; (3) Composition in Irish. *Second year*: (1) The Epistles, as before; (2) Irish

Composition; (3) Declamation in Irish (extempore). *Third year*: (1) The Historical Books of the Irish Bible; (2) Composition; (3) Declamation in Irish. *Fourth year*: (1) The remainder of the Bible; (2) Composition; (3) Declamation in Irish; (4) the Book of Common Prayer compared with Scripture.

Kyle Irish Prize.—A prize for the encouragement of the study of the Irish language has been founded in the University in commemoration of the late Right Rev. Samuel Kyle, Bishop of Cork, Cloyne, and Ross, and formerly Provost of Trinity College. The following are the resolutions entered into by the Trustees of the fund, and agreed to by the Provost and Senior Fellows:

(1). That the funds collected shall be invested in Government securities, or Bank Stock, in the joint names of the Provost and Senior Fellows of Trinity College, the Professor of Irish, and the Dean and Archdeacon of Cork, all for the time being.

(2). That the endowment shall consist of one year's interest of the principal sum so invested.*

(3). That no persons shall be qualified to become candidates but persons born in the United Diocese of Cork, Cloyne, and Ross, or who may have been educated in that diocese for not less than two years.

(4). The Kyle prize to be attainable only by Divinity students, at an annual examination in the Irish language, held during the Divinity course.

(5). The Divinity student so obtaining the prize may again become a candidate for it in the next succeeding year, but not oftener, nor can he hold it for more than two years.

(6). The candidates for examination shall be examined in the Irish Grammar, the Four Gospels, the Acts of the Apostles, the Epistle to the Romans, 1st and 2nd Timothy, the Epistle to the Hebrews, and Composition.

(7). In the event of there being in any year no candidate for the prize, or want of sufficient merit, the interest of the sum so invested in the funds shall be added to the principal sum.

Butcher Exhibitions.—A sum of money having been subscribed in memory of the late Bishop of Meath, the following plan for the application of the fund was agreed to at a meeting of the Butcher Memorial Committee, held on 24th April, 1877, the Provost in the chair, and adopted by the General Synod, April 26th, 1877:

The interest on the money in the hands of the representative body to the credit of the above fund (when it shall have reached the sum of £2500), and of such further sums as may be paid in to its credit as subscriptions or unallocated interest (as hereinafter referred to) to be applied in providing exhibitions in connection with the Divinity School of the Church of Ireland, to be called the "Butcher exhibitions," under the following rules:

* The present annual value of this prize is £9 10s. 4d.

1st. That the exhibitions be awarded by a Board, consisting of the Archbishop of Dublin for the time being, the Bishop of Meath for the time being, and the Regius Professor of Divinity for the time being, or (in the event of there being no Regius Professor of Divinity) the professor who may discharge the duties now discharged by him, two of whom shall form a quorum.

2nd. That the exhibitions be conferred on meritorious Divinity students who purpose entering the ministry of the Church of Ireland, and who in consequence of their limited means may require assistance in completing their theological education, regard at the same time being had to their attainments and their general fitness for the Ministry of the Church.

3rd. That these exhibitions be conferred on students who shall have completed their Junior Divinity year, and be tenable during their Senior year, on condition of their duly proceeding with their Divinity course.

4th. That the Board determine the number and amount of the several exhibitions, provided that the amount of any one shall not be more than £50 or less than £25.

5th. That in the event of there not being a sufficient number of deserving and qualified candidates, or the entire interest on the fund within any year not being expended, from any other cause, the Board be empowered to place the unapplied portion of the annual interest to the credit of the capital of the fund.

6th. That the exhibitions be paid quarterly, on 1st Oct., 1st Jan., 1st April, and 1st July in each year, by an order on the Representative Body, signed by the Regius or other Professor of Divinity on the Board.

7th. That it be in the power of the General Synod, on the application of the Board, to vary the foregoing regulations as circumstances may require.

8th. That in the case of unavoidable absence, any member of the Board be empowered to appoint, by writing, a substitute to act for him.

Law School.

The Law School of the University of Dublin is under the control of the Provost and Senior Fellows of Trinity College, who, however, act in concurrence with the Benchers of the King's Inns. Its staff consists of three professors—the Regius Professor of Laws*, the Regius Professor of Feudal and English Law, the Professor of Jurisprudence and International Law.

Regulations of the Board with regard to Lectures, and respecting Students of the King's Inns.—Under the resolutions passed by the Provost and Senior Fellows, on the 1st June, 1850, the following regulations were enacted:

* The Professorship, in the Statutes of Charles I., is described as the profession of Jurisprudence, and the Professor, in the Letters Patent of Charles II., is styled "Our Professor of the Laws." In the Decrees of the Board and Visitors, the title generally used is that of the Professor of Civil Law. The above is the style adopted by the Professor in his official acts.

(1). The Regius Professor of Laws shall deliver lectures on General Jurisprudence and Civil Law.

(2). The Professor of Feudal and English Law shall deliver lectures on the subject of Real Property.

(3). The lectures of these two professors shall be delivered in College, on such days of term, and at such hours, as may be agreed on upon consultation with the Education Committee of the Benchers; and not fewer than twelve lectures shall be given in each of the three College terms.

(4). The lectures shall be open to students and to the public gratuitously, and no fee shall be required from students of the King's Inns beyond that already paid by them upon their admission into that society.

(5). Students having their names on the College books shall have the same privileges in the Senior* Sophister year of the Undergraduate course as are allowed to Divinity, Medical, and Engineering students.

(6). The Law Professors shall, at the conclusion of each academic year, give certificates of attendance to such students of the Society of King's Inns as shall have attended five-sixths† of the whole number of lectures in each term; and shall also forward to the Senior Lecturer, at the end of each term, a list of all students having their names on the College books who have had credit for full attendance on their lectures during the term.

The following resolutions, in reference to the duties o the Professor of Jurisprudence and International Law, were adopted by the Board and Council in May, 1877:

(1). That the course shall be an annual one.

(2). That the times of lecture shall be so arranged as to enable students attending the lectures of the Regius Professor of Laws to attend also the lectures of the Professor of Jurisprudence and International Law, and that the hours of lecture shall be the same, on different days.

(3). That the course shall include Comparative Jurisprudence and International and Colonial Law.

(4). That these lectures shall be open to all students of the University, free of charge.

(5). That it shall be the duty of the professor to give private instruction to candidates for Indian Civil Service appointments, receiving fees for the same on a scale to be approved by the Board.

(6). That the terms and the number of lectures, and the examinations to be held, shall be subject to the existing rules relating to the other professorships of law.

Course of Study.—The course of study in the Law School extends over two years. Students are required to attend one year's course of lectures with each of the three professors, and to pass the General

* Professional privileges are now extended to Junior Sophisters.

† See Resolution of Board, April 26, 1879, p. 155.

examination held at the end of each course. Not more than the courses of two professors can be attended in the same year. A student may commence his attendance in any term, but must complete the terms of the first year, and pass at least one of the General examinations before he enters on the second year. If in the first year he has kept terms with two professors, and omitted one of the General examinations corresponding, he may pass it as a supplementalist in the second year. To meet the case of students commencing attendance after the first term, an examination corresponding to the General examination held at the termination of the annual course is held at the close of the Michaelmas and Hilary terms. A term is kept by attendance at three-quarters of a course of twelve lectures, and by passing an examination at the end of the term in the subjects of the term. This examination is held by the professors alone in Michaelmas and Hilary terms; and a General examination is held in Trinity term at the end of the academic year, in all the subjects of the year, which is conducted by the professor, associated with some external examiner selected by the Board. The subject of Equity is treated in connexion with their respective courses by the Regius Professor of Laws, the Regius Professor of Feudal and English Law, and the King's Inns Professor of Personal Property.

Civil Law Class.—To obtain academic credit for the year, students must attend three consecutive terms, pass an examination at the end of Michaelmas and Hilary terms, and then pass the General examination held at the end of Trinity term in the subjects of the year. The following are the *text books* adopted by the Regius Professor: Maine's "Ancient Law," "Institutes of Justinian" (Sandar's Edition), Hunter's "Roman Law," Savigny on "Possession," Savigny on "Obligations."

Feudal and English Law Class.—To obtain academic credit for the year, students must attend three consecutive terms, and pass an examination at the end of Michaelmas and Hilary terms, and then pass the General examination held at the end of Trinity term, in the subjects of the year. The *subjects* for prelection and examination for the ensuing year are: (1) Elementary Digest of the Law of Property in Land, by Stephen Martin Leake; (2) Lord Coke's First Institute of the Laws of England, by J. H. Thomas; (3) History of the Law of Real Property, by Digby.

Class in International Law.—To obtain academic credit for the year, students must attend three consecutive terms, and pass an examination at the end of Michaelmas and Hilary terms, and then pass the General examination held at the end of Trinity term in the subjects of the year.

Privileges of Law Students.—Students being Sophisters on the College Books, who have attended the prelections, and passed the examinations of any one of the Professors of Law, in the year for which exemption is claimed, will be considered Law students. To obtain the privilege of a Professional student it is necessary that the student should attend at least three-fourths of the prelections, and pass the examination of the term for which the privilege is claimed. The privilege of a Professional student will be allowed, at the Degree examination, to those students only who have passed the Annual examination. A certificate of compliance with these conditions must be furnished by the Professor to the Senior Lecturer.

Law Premiums.—At the end of Trinity term each of the three professors of the School of Law may award £15 in two or three prizes, at his discretion, to the best answerers among the College students who have got credit for attendance on the lectures of his class. The merits of the candidates will be determined by the aggregate of marks obtained by them at the three examinations which follow, respectively, the Michaelmas, Hilary, and Trinity courses of lectures.

Regulations with regard to Degrees in Law.—The Regius Professor of Laws is moderator in all disputations for degrees in Law, and presents the candidates for those degrees at the Commencements. The degrees are Bachelor and Doctor *in utroque Jure*.

1. *Bachelor of Laws.*—A candidate for the degree of *Bachelor of Laws* must have taken the degree of Bachelor of Arts. He must also [*a*] have completed his attendance in the Law School as defined under the head "Course of Study," and must have been *classed* at the General examination held by each of the professors, *or* [*b*] must have passed a special examination in the subjects of the curriculum of the Law School. When the degree of LL.B. is taken by examination, the *subjects* in which the candidates will be examined are as follows: The *books recommended* in connection with each subject are the following: (1) *Jurisprudence*: Bentham—"Theory of Legislation," pp. 1-236; Maine —"Ancient Law." (2) *Civil Law* [Ancient and Modern]: Mackenzie—"Studies in Roman Law"; Pothier—"Treatise on the Law of Obligations on Contracts" (Parts i. and ii.). (3) *International Law*: Manning—"International Law" (ed. by Amos.) (4) *English Law*: Digby—"History of the English Law of Real Property"; Snell—"Principles of Equity." The examinations are mainly by papers; but each examiner is at liberty to supplement his examination by questions *viva voce*. An examination for the degree of LL.B. is held three times in each year. Candidates are required to have their names on the College Books at the time of the examination; they may replace their names for this

purpose by the payment of 15s. to the Junior Bursar. The *fee* for the degree of LL.B. is £11 15s., payable to the Senior Proctor.

2. *Doctor of Laws.*—A candidate for the degree of *Doctor of Laws* must be a LL.B. of three years' standing. Candidates may obtain the degree in any of the following ways: (1) By passing an examination in the application of the principles learned in the course for the LL.B. degree. (2) By passing an examination in the Principles of Political Philosophy, Constitutional History, and International Law. For this examination the *books* stated are *recommended* in connection with the several subjects. (i) Political Philosophy: Freeman—"Comparative Politics"; Freeman—"History of Federalism" (Introduction to vol. i.); Sir G. C. Lewis—"Essay on the Government of Dependencies"; Laveleye—"On Primitive Property" (ed. by T. E. C. Leslie); De Tocqueville—"L'Ancien Régime." (ii.) Constitutional History: Stubbs—"Constitutional History" (Selected periods); Stubbs—"Select English Charters"; Guizot—"History of Civilisation in Europe;" Guizot—(Selections from) "History of Civilisation in France." (iii.) International Law: Sir T. Twiss—"Law of Nations" (latest edition). (3) By presenting to the Regius Professor of Civil Law, for the consideration of the examiners, a printed thesis, composed by the candidate, on a subject in the Law course approved of by the professor. The candidate will be liable to be examined on subjects connected with his thesis. The thesis must be presented to the professor one month before the Commencements, and, if it be approved by the Professors of the Law School, a copy shall be deposited in the College Library. (4) The degree of LL.D. may also be obtained by a candidate who is the author of a published work connected with legal or political science, of merit sufficient, in the judgment of the examiners, to entitle the candidate to the degree. Candidates for degrees are required to notify to the Registrar of the Law School, one month before the Commencements, the particular qualifications which they propose to offer for their degrees. The degrees of LL.B. and LL.D. may be obtained according to the Rules formerly in force until the end of the year 1881. Students who shall have taken the LL.B. degree before the close of 1881 may proceed to the degree of LL.D., according to the rules formerly in force, up to the close of the year 1884. The *fee* for the degree of LL.D. is £22, payable to the Senior Proctor.

Rules as to the Admission of Candidates residing in the Colonies.—At a meeting of the University Senate, held on December 13, 1862, it was resolved, that any student of the University engaged in any civil, ecclesiastical, or other profession in the Colonies, should be allowed

(although not present in the Senate) to proceed to his degree upon the following conditions: (1) That he was of the proper standing for taking the degree. (2) That he had passed all the lectures and examinations necessary for his degree. (3) That he had transmitted in writing the exercises for the degree to the Regius Professor of the proper Faculty, and that they had been approved of. (4) That he had transmitted letters, testimonial of character, signed, if a clergyman, by the bishop, or archdeacon of his diocese in the colony; if a layman, by the bishop, archdeacon, governor of the province, or chief justice.

Rules as to Admission ad Eundem Gradum.—Graduates of the Universities of Oxford and Cambridge are entitled to be admitted to degrees in the University of Dublin, corresponding to those which they hold in their own universities, on payment of the usual fees which the University of Dublin charges for the degrees to which they seek to be admitted. They are then at liberty to proceed to any higher degrees in the same manner and on the same conditions as if they had originally graduated in Dublin.

School of Engineering.

The School of Engineering in the University of Dublin was established in the year 1842, with the view of combining the theoretical and practical instruction requisite for the profession of Civil Engineering, and of imparting to the members of that profession the other advantages of academical education. With these objects in view, it has been deemed advisable that a student preparing for the profession of Civil Engineering should be a member of the College during his course, and subject to its general discipline. In Trinity term, 1860, at a meeting of the Senate of the University, it was resolved, that (instead of the diploma hitherto granted) such students as have completed the full course in Engineering shall receive an University licence, to be granted publicly in the Senate, at one of the Commencements for conferring degrees. In Trinity term, 1872, it was further resolved that the degree of *Bachelor of Engineering* should be created to be bestowed on all Bachelors of Arts who shall have completed the full course in Engineering. In Hilary term, 1877, it was resolved by the Board and Council that a student, in order to obtain a licence in Engineering, should be required to have completed the first two years in Arts. The degree of *Master in Civil Engineering* is bestowed on those persons who have been admitted to the degree of Bachelor of Engineering, and who have publicly practised as Civil Engineers, for at least three years after being admitted to the lower degree. The *fee* for the degree of Bachelor in Engineering, or for the University licence in Engineering, is £1.

Students intending to present themselves at the Final examination must give one week's notice to the Registrar of the Engineering School. The Professional course continues for three years. The instruction, which is given during the academical term, partly by lectures, and partly in the laboratory and the field, is arranged as follows: *First year* (*Junior class*): Mathematics; Theoretical Mechanics; Chemistry and Mineralogy applied to the Arts of Construction; Geometrical Drawing. *Second year* (*Middle class*): Practical Mechanics; Principles of Physics; Drawing, Surveying, Levelling, and Practical Mensuration; Hydraulics or Strength of Materials (in alternate years); Practical Chemistry. *Third year* (*Senior class*): Hydraulics or Strength of Materials (in alternate years); Geology; Practical Engineering; Drawing, Surveying, and Levelling. The following is a syllabus of *authors recommended* to the students, who will also be required to answer in the subjects of the lectures: *Middle class*: *Text books* Baker's "Rudimentary Treatise on Surveying and Levelling," "Heather on Mathematical Instruments," Williams' "Practical Geodesy" (third edition), Bidder's "Tables of Earthwork," "Buck on the Oblique Arch," omitting the last chapter, "Manual of Engineering," by C. P. Cotton (second edition). *Senior class*: *Engineering*: (1) "Selections of Specifications" (privately printed), omit "Gloucester and Berkeley Canal," and "Coffer Dam, New House of Parliament." (2) "Elements of Practical Hydraulics" (third edition). (3) Strength of Materials: (*a*) Eaton Hodgkinson's edition of "Tredgold on Cast Iron," part i. Introduction, to page 11; section 3; section 4. Part ii.—Introduction, to Article 34, inclusive; Arts. 86 to 146, inclusive, omitting 106 and 107; Articles 153 to 159, inclusive; Articles 165 to 179, inclusive. (*b*) E. Clark on "Britannia Bridge," pages 155 to 205, 239 to 248, 268 (omit xxxv., xxxvi., xlii., xliii.) to 274, 280 to 285, 303 to 396, 675 to 762, inclusive. (*c*) "Theory of Strains in Girders, &c.," by B. B. Stoney (second edition). (*d*) "Elements of Practical Construction," Part i.—Direct Compression and Tension. (4) Practical Construction: (*a*) "Experiments on Retaining Walls," vol. i. "Transactions of Civil Engineers of Ireland"—Fagel Lib. m. 14. (*b*) Buck on "Oblique Arch," with proof of joints of face meeting in focus, and formula for the angle of face of Voussoirs, as given at lectures; chapter on Segmental Arch; omit last chapter. (*c*) "Transactions of Civil Engineers," London, quarto. Papers on "Lary Bridge," "Dora Ripaira Bridge," "Grosvenor Bridge at Chester," "Bow Bridge," "Coffer Dam in River Ribble," "Hull Docks." (Library, vv., cc., 37—39.) (*d*) "Proceedings Inst. Civ. Engineers of London" (Library, Gall. B. 17). "Station Roofs," xiv., 251; xxvii., 421 to 424, and 431 to 438; xxx., part ii. 78.

"Coffer Dams and Foundations," i. (1840), 18; ix., 1; xiv., 32; xvi., 449; xxi., 268; xxii., 497; xxviii., 325; xxxi., 1 to 32; xxxii., part ii., 146 to 163. "Docks," xviii., 445 and 490; xxiv., 38. "Viaducts," x., 219 and 296; xi., 69; xxi., 258; xxii., 44, 512, 540. "Wrought Iron Beams," xi., 1; xiv., 443. "Rail Testing," xxxii., part ii., 192. "Retaining Walls," xxxvii., part i., 332. (*e*) Day on "the Formation of Railways." (*f*) "Bann Reservoir," pages 37 to 46, in Weale's "Quarterly Papers on Engineering," vol. vi. (*g*) "Tracts on Hydraulics" (Library, Gallery, K. 22—18). (*h*) "Manual of Engineering," by C. P. Cotton, second edition. (5) Tunneling: (*a*) "Transactions of Institution of Civil Engineers of Ireland," vol. iii. (Fagel Lib. m. 14. Article, Woodhead Tunnel; ditto, vol. ix., Burgh-quay Wall, Obelisk Bridge). (*b*) "Simms on Tunneling," chapter on Shaft Sinking, and chapter ix. (*c*) Weale's "Quarterly Papers on Engineering," vol. iii., Memoir on Thames Tunnel, from middle of page 10 to page 25, section i.; vol. v., pages 1 to 20, being section ii., and 50, 51, 52. (*d*) "Weale's Rudimentary Treatise," by Sir J. Burgoyne, article at pages 60 to 74, and 84 to 87. *Chemistry*: (1) Roscoe's "Lessons in Elementary Chemistry," new edition, to end of lesson xxvi.; (2) Thorpe and Muir's "Qualitative Chemical Analysis. *Physics*: (1) Atkinson's "Translation of Ganot's Treatise on Physics"; (2) Galbraith and Haughton's "Manual of the Steam Engine." *Geology*: (1) Phillips' "Guide to Geology"; (2) Haughton's "Manual of Geology." The instruction in Levelling and Surveying, during the Middle and Senior Years, is intended to make the students able to perform, with due accuracy and rapidity, every duty in these branches, which an Assistant Engineer may be required to fulfil. The class is divided into parties, in order to insure a greater degree of individual instruction; and each party having, under the direction of the Assistant Professor of Engineering, completed and checked a section in the field, and plotted the work, is required to go out and do the same without assistance; and in like manner with Surveying. A model-room is attached to the School. In it are kept various models illustrative of the principal practical operations of Civil Engineering. The Professor of Applied Chemistry delivers three Courses of Lectures, as follows: *Michaelmas term*: The course delivered during this term, though necessarily one of an elementary nature, embraces many topics of practical interest. It is principally occupied with the Chemistry of the Non-Metallic Elements. *Hilary term*: In this term, the Chemistry of the Metals, and of their more important compounds, is brought under discussion; and, at the same time, numerous questions, having a relation to Engineering and Metallurgic operations, are considered and explained. *Trinity term*:

Mineralogy: The course on Mineralogy has for its object to convey a scientific knowledge of the leading physical characters (in particular, the crystalline form) by which mineral species are distinguished from each other, and to familiarise the student with the simple minerals which compose the earth's crust, and the metallic ores which are deposited within it. The Chemical Laboratory is open on alternate days, during the first two terms, to students of the Middle Class, who receive, in addition to the information communicated in the lectures of the first year, practical instruction in the processes of Manipulative Chemistry. The Professor of Natural and Experimental Philosophy delivers a course of lectures: in *Michaelmas term*, on the Theory of Heat; *Hilary term*, on Electricity and Magnetism; *Trinity term*, on Light and Sound. The Professor of Geology delivers a course of lectures in: *Michaelmas term*, on Physical Geology; *Hilary term*, on Stratigraphic Geology and Palæontology; *Trinity term*, on the Applications of Geology to Engineering and Mining Operations.

Regulations.—(1) The Engineering Classes are formed early in the month of November, at the commencement of Michaelmas term. (2) All students in the Engineering School must have their names on the College books. (3) Any student in Arts may join the Junior Class of the Engineering School, on passing an examination in Elementary Mathematics, including the first six books of Euclid, Arithmetic, and the Elementary Rules of Algebra, to be held at the commencement of Michaelmas term. If, in addition, he is able to pass a more advanced examination in the Mathematics and Theoretical Mechanics of the Junior year—viz., Algebra, Plane Trigonometry, Elements of the Differential and Integral Calculus, Descriptive Geometry, and Theoretical Mechanics, he will be permitted to join at once the Middle Class of the Engineering School. (4) A student in the Engineering School may, at the same time, pursue his studies in Arts, or not, at his option.* (5) The Engineering School comprises three classes—the Junior, Middle, and Senior Classes, consisting of students in the first, second, and third years of their courses respectively; and a student, in order to be entitled to rise from a lower to a higher class, must not only have obtained credit for attendance on the lectures prescribed for the former class, but must also have passed an examination in the subject of those lectures, at the end of the year. To obtain credit for attendance on lectures, a student must have attended at least three-fourths of the whole number of lectures delivered by each lecturer, during each of the three terms in the

* See Note to Rule 6.

academic year. The regular examination is held at the end of Trinity term: if from any cause a student shall fail to pass this examination, he will be allowed to present himself at a Supplemental examination, at the beginning of the following Michaelmas term. (6) On concluding the Senior year of his course, and passing the Final examination, the student will receive the University licence or degree in Civil Engineering.* If a student, from any cause, shall fail to pass the examination at the end of his course, he will be permitted to present himself at a Supplemental examination, at a time to be fixed by the examiners. A student who joins the Engineering School in the Middle Class (under the second provision of Rule 3) will be required to attend the lectures in Chemistry, along with those prescribed for the Middle Class. (7) The student in Engineering shall pay the sum of £10 yearly, in addition to the ordinary charge for keeping his name on the College books; such payment to be made before the 20th day of November. The names of students whose fees shall not have been paid at that date shall be removed from the rolls of the several lecturers. If a student shall, under any circumstances, attend in the same year the lectures of the Professor of Applied Chemistry, and of the Professor of Engineering, he shall pay in that year £15, in addition to the College charges. (8) No private certificates can be issued by any professor or lecturer connected with the School of Engineering. (9) The examinations held at the end of the first year, in Mathematics, Theoretical Mechanics, Chemistry, and Mineralogy, shall be final. (10) The examination at the end of the second year, in Practical Mechanics and Physics, shall be final; and the subject of Practical Chemistry shall be introduced as an additional subject at the end of the second year. (11) The Final examination shall be held exclusively in the practical subjects—Practical Engineering, Geology, and Mining—and shall be conducted by the Professor of Engineering, his Assistant, and the Professor of Geology. Practical Engineering is to be understood to include—(1) Descriptive Engineering; (2) Field Work; (3) Drawing. 12. A student who joined the School of Engineering before April 14, 1877, has the option of taking either the old or the new method of examination for his degree, provided that the student shall pass in all the subjects of examination either at the Final examination or before.

Honours.—Since the year 1849 *special certificates* have been awarded to such students as have distinguished themselves in the following departments: (1) Practical Engineering; (2) Mechanics and Experimental Physics; (3) Chemistry and Geology. Since the year 1855, the

* Provided he has the requisite qualification in Arts.

subjects comprehended in the third department have been Mining Chemistry, Geology, and Mineralogy.

Royal University of Ireland.

The following are the degrees conferred: *Arts*: Bachelor of Arts, Master of Arts, Doctor of Literature. *Science*: Doctor of Science. *Engineering*: Bachelor of Engineering, Master of Engineering. *Music*: Bachelor of Music, Doctor of Music. *Medicine*: Bachelor of Medicine, Doctor of Medicine. *Surgery*: Master of Surgery: *in Obstetrics*, a special diploma; *in Sanitary Science*, a special diploma. *Law*: Bachelor of Laws, Doctor of Laws.

All the privileges of the University are *open to either sex*. The matriculation examination is incumbent upon all candidates for degrees. A candidate rejected at any examination is not entitled to receive back any portion of the fee paid for such examination, nor will he "get credit therefor at any future examination."

Matriculation.—Subjects: *Latin*—One poetical and one prose book (announced); Latin Grammar—translation of sentences into Latin—Outlines of Roman History; one of the following *languages*—Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic. The work in each of the above subjects consists of translation into English and Grammar. In Greek, outlines of Greek History are also required. In French, German, Italian, Spanish, and Irish, translation of English sentences into these languages is required. The particular books are in all cases announced beforehand. *English*—One poetical and one prose work (announced); English Grammar; Outlines of Modern Geography; a short Composition. *Elementary Mathematics*: Arithmetic; Algebra to simple equations; Euclid, books i. and ii. *Experimental Physics*: The elementary facts of Mechanics, Hydrostatics, and Pneumatics. The above is the Pass course; if Honours be sought, additional work must be taken in each subject.

Degrees in Arts.

The curriculum for the *Bachelorship* is of three years' duration. Beside the Matriculation, the examinations are—the First and Second University examinations and the Degree examination.

First University Examination.—One academical year must have elapsed since matriculation. The subjects are: (1) Latin; (2) any one of the following languages—Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; (3) English Language and Literature; (4) Mathematics; (5) Experimental Physics. For this examination there are two courses—Pass and Honours.

Second University Examination in Arts.—One academical year must

have elapsed since the date of passing the First University examination. The subjects are: (1) Latin; (2) Greek; (3) English Language and Literature; (4) any one of the following languages—French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; (5) Logic; (6) Mathematics; (7) Mathematical Physics; (8) Experimental Physics; (9) Chemistry; (10) Biology (including Physiology, Botany, and Zoology); (11) Geology (including Mineralogy and Physical Geography). Candidates will be permitted to answer at their option in any one of the following groups of subjects: (1) Latin, Greek, English, any two of the other subjects, one being either Logic or Mathematics: (3) Mathematics, Mathematical Physics, and two other of the above subjects. In the above examination there are two courses —Pass and Honours.

Degree Examination.—One academical year must have elapsed since passing the Second University examination. The subjects are: (1) Latin; (2) Greek; (3) English, and any one of the following languages—French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; (4) Logic, and either Metaphysics, Ethics, or Political Economy; (5) Mathematics; (6) Mathematical Physics; (7) Experimental Physics; (8) Chemistry; (9) Biology (including Physiology, Botany, and Zoology); (10) Geology (including Mineralogy and Physical Geography). Candidates will be permitted at their option to answer in either of the following groups of subjects: (1) Latin, Greek, and either one other of the above subjects or a limited course of Mathematics and Mathematical Physics; or (2) Mathematics, Mathematical Physics, and one other of the above subjects. In the above examination there are two courses—Pass and Honours.

Degree of M.A.—Candidates may present themselves for the examination for this degree after the lapse of one academical year from the time of obtaining the degree of B.A. The subjects are: (1) Latin and Greek; (2) English, and any two of the following languages—French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; (3) Logic, Metaphysics, Ethics, and History of Philosophy; (4) Civil and Constitutional History, Political Economy, and Political Philosophy; (5) Mathematics and Mathematical Physics; (6) Experimental Physics and Chemistry; (7) Biology and Geology.

Exhibitions, &c.—In Arts: At the Matriculation examination, ten first class at £24 and twenty second class at £12; at the First University examination, ten first class at £30 and twenty second class at £15; at the Second University examination, six first class at £40 and twelve second class at £20; at the B.A. degree examination, seven

first class at £50 and fourteen second class at £25. In order to be eligible for one of these exhibitions a candidate must not exceed twenty years at matriculation, twenty-two years at the First University examination, twenty-three years at the Second University examination, and twenty-four years at the B.A. degree examination. Six *scholarships* of £50 per annum each will be offered every year—two in Classics, two in Mathematics, and two in Modern Literature. They will be tenable for three years, and open to students under twenty-one years of age. Two *studentships* of £100 value each, tenable five years, will be awarded.

School of Civil Engineering.

The *curriculum* is of three years' duration. The examinations to be passed are: Matriculation, First University examination in Arts, First Professional, Second Professional, and the Degree examination. Students may be admitted to the First Professional examination after the lapse of one academical year from the date of their Matriculation; the First University examination may be passed at the same time. The *subjects* are: Mathematics, Mathematical Physics, Experimental Physics, Drawing, Descriptive Architecture. Students are admitted to the Second Professional examination after the lapse of one year from the date of their passing the First Professional. The *subjects* are: Mathematics, Mathematical Physics, Chemistry, Geology, including Physical Geography.

Practical Engineering.—Students are admitted to the Final examination for the B.A. degree after the lapse of one academical year from the time of passing the Second Professional examination. The *subjects* are: Applied Natural Philosophy, Practical Engineering, Drawing. In each of the above examinations there are two courses—a "Pass" and an "Honours." A *diploma* in Engineering may be granted to any candidate who, without having passed the Matriculation and First University examination, passes the two Professional examinations and the Degree examinations.

M.E. Degree.—Candidates may present themselves for examination for this degree after the lapse of one academical year from the time of obtaining the degree of B.E.

Exhibitions, &c.—Will be awarded annually: At the First Professional—one first class at £30, and one second class at £15. At the Second Professional—one first class at £40, and one second class at £20. At the B.E. examination—one first class at £50, and one second class at £25. Special prizes will also be awarded.

Degrees in Music.

The *curriculum* is of three years' duration. The examinations are:

Matriculation, First University, First examination in Music and Degree examination. As in the case of the Faculties already dealt with, one academical year must elapse between the time of passing one examination and presentation at another. The *subjects* of the First examination in Music are—(1) The Elements of Acoustics; the Laws of the Production and Measurement of Simple Sounds—Theory and Simpler Phenomena of Compound Sounds; Consonance and Dissonance. (2) Musical Intervals, Scales, Tonality—Temperament—Melody—Time—Rhythm—the Principles of the Construction of Chords. (3) Outlines of the History of Musical Development.

The test for the degree of B. Mus. consists of an original musical composition, and of an examination in: (1) Practical Harmony and Thorough Bass; Counterpoint in not more than five parts, with Canon and Fugue; Form in Musical Composition. (2) Instrumentation so far as is necessary for understanding and reading a full score. (3) A Critical Knowledge of the Full Scores of a prescribed list of Standard Classical Compositions.

D. Mus. Degree.—Candidates may present themselves for the examination for this degree after the lapse of two academical years from the time of obtaining the degree of B. Mus. The test consists of an original musical composition, and of an examination in: (1) The Phenomena and Laws governing the Production of Musical Sounds or the Physical Basis of Music. (2) Theory of Music. (3) History of Measured Music, Harmony, and Counterpoint.

Gold and *silver medals* are awarded at the degree examinations.

Degrees in Law.

LL.B. Degree.—All candidates for this degree must be Bachelors of Arts of one year's standing. The examination embraces: Civil Law, Jurisprudence, Constitutional Law, Law of Property and Principles of Conveyancing, Common and Criminal Law, Equity, Pleading practice and Evidence.

Candidates may present themselves for the *LL.D.* degree one year after obtaining that of LL.B. The examination will be in the same subjects as for the latter. Two prizes—one of £50 and one of £25—are awarded at the LL.B. examination.

Fees. — Matriculation, 10s.; First University examination, £1; Second, £1; B.A. degree examination, £1; examination for M.A. degree, £2; First Professional B.E., £1; Second, £1; Degree examination, £3; examination for M.E. degree, £3; First examina ion in Music, £1; Degree examination (Mus. B.), £2; examination for D. Mus., £5; LL.B. degree examination, £3; LL.D. degree examination, £5.

Roman Catholic University of Ireland.

Faculty of Philosophy and Letters.

Academical Course of the University.—The general character of the academical course may be stated in a few words. The normal age of entrance is sixteen years. The student commences in the School of Philosophy and Letters. About the middle of the University course he should pass the Scholarship examination. When he has become a scholar, unless he passes into the Schools of Medicine, Science, &c., he still continues the course of Philosophy and Letters; at the end of one year he is admitted to his First examination for the degree of Bachelor of Arts, and at the end of another year to the Second examination for the same degree, being then of the normal age of twenty, and of at least three sessions' standing. Another year carries him to the degree of Master of Arts, and three years more qualify him for a place in the Senate of the University, in the manner prescribed by the Statutes. Such is the general delineation of the University Course, which must now be described more in detail.

Students of the University.—In order to become formally *students*, and consequently members of the University, entitled to all its privileges, the candidates for admission must pass the Entrance, or Matriculation examination, and place themselves under the guidance of the University in the manner described below. The students of the University are of two classes—resident and non-resident.

1. *Resident Students.*—The resident students may be either *interns* or *externs*. Intern students are such as reside in one of the Colleges, or Collegiate Houses, of the University, in Dublin or its suburbs. Extern students are of two classes: 1st, Those who live with their friends in Dublin, or its neighbourhood, and attend the University Lectures; 2nd, Those who live in lodging-houses approved by the University. The resident students of all classes are required to attend the University Lectures, to be present at the University mass on Sundays and holidays, to frequent the holy sacraments of Penance and the Eucharist, and to obey such rules and regulations as shall from time to time be made by the authorities of the University. They are reminded of the obligation of leading in all things good Christian lives. And interns, as well as those externs who reside in the approved lodging-houses, are required to observe the rules of their houses, especially with respect to keeping regular hours.

2. *Non-Resident or Affiliated Students.*—Affiliated students of the University are those who, after having passed the Entrance examination in the University, or elsewhere before a University examiner, have been enrolled on the books of the University and

pursue their studies in an approved college or school with the view of completing the higher studies in the University.

Programme of Examinations.

Matriculation.—The subjects of the Matriculation, or Entrance examination, are: Arithmetic (the four Rules, proportion, fractions, decimals, &c.); Algebra (the first four Rules, fractions, simple equations); the first two books of Euclid's Elements of Geometry; English Composition; Rudiments of the French Language; Elements of Ancient or of Modern History—Elements of Modern Geography; the Christian Doctrine—Elements of the History of the Bible; Latin Composition; Construing and parsing in one Greek and one Latin book, to be selected by the candidate out of the following list—*Greek*—Homer's Iliad, any three books; Sophocles, any play; Euripides, any play; Herodotus, any book; Xenophon, Cyropaedia, or Anabasis, two books; Plato, Apologia Socratis; Lucian, Walker's Selections. *Latin*: Virgil, Georgics, any two books—Æneid, any three books; Horace, Odes, any two books—Satires, or Epistles; Cicero, Select Orations, viz., in Catilinam, i.—iv., or any three others; Livy, books i., ii., iii.; or iv., v. Deficiency in Greek may be compensated by proficiency in Mathematics. Students distinguishing themselves at General Matriculation examinations will be classified accordingly.

Scholarship.—A student presents himself for this examination any time after the completion of his third term, and before the end of his eighth term.

Pass Examination.—For the Ordinary or Pass examination the candidate is examined in three distinct subjects. The candidate must present Latin, while he is allowed a choice between Greek, a Modern Language, and Irish, and between Mathematics, Experimental Physics, and Logic. Besides the three special subjects of examination, the candidate must be prepared with an exact knowledge of the matters contained in some larger Catechism, and in the Four Gospels, and with a general knowledge of Ancient History, Geography, and Chronology. Candidates for the Scholarship are required to forward to the Secretary of the University, *one* month before the date of the examination, a list of the subjects and books which they will present for their examination.

Degree of Bachelor of Arts.—This examination is divided into two parts, called, respectively, the First and the Second B.A. examination. The student may be admitted to the First B.A. examination in the third term after he has passed the Scholarship examination. He may be admitted to the Second B.A. examination in the third term after he has passed the First B.A. examination. He must, in each case, give

two months notice to the Secretary of the University of his intention to submit himself to the examination, and of the books which he will present.

Pass Examination.—1. *First Examination for the Degree of Bachelor of Arts.*—The subject matter of this examination is as follows: I. *Christian Knowledge, i.e.*, Knowledge of the Greek Text of the Gospel according to St. Luke; Knowledge of the matter of the Four Gospels and the Acts of the Apostles; of the History of the Old Testament; of an extended Exposition of the Christian Doctrine, *e.g.*, the Catechism of the Council of Trent, or Deharbe's Exposition. II. *Philosophy, i.e.*: Logic; First six books of Euclid; Algebra to quadratic equations. III. *Latin Literature*: One prose writer and one Poet—*i.e.*, a sufficient portion of their works to be selected by the candidate.

2. *Second Examination for the Degree of Bachelor of Arts.*—The subject matter of this examination is twofold, viz.: I. *Greek Literature*, viz.: One prose writer and one poet, *i.e.*, a sufficient portion of their works. II. *History, i.e.*: One out of the six Tercentenaries of Profane History from the Christian Era to A.D. 1800.

Degree of Bachelor in Philosophy.—Pass Examination: The subjects of this examination come under two heads: A. i. Logic, both Formal and Critical; ii. Ontology, together with Psychology, or Natural Theology, at the option of the candidate. B. Mathematics, viz.: i. Algebra to progressions (inclusively), and logarithms; ii. Geometry, the first six books of Euclid, and Plane Trigonometry.

Degree of Bachelor of Science.—Pass Examination: The subjects of this examination are: A. Elementary Mathematics, viz., Algebra, Euclid, and Plane Trigonometry. B. And any two of the following subjects: (1) Higher Mathematics, viz., Coordinate Geometry, Differential and Integral Calculus. (2) Mathematical Physics, as, *ex gr.*, Galbraith and Haughton's Manuals of Mechanics, Hydrostatics, and Optics; Newth's Mechanics; Besant's Elementary Treatise on Hydrostatics. (3) Experimental Physics—viz., the complete course specified above under six heads, as in Ganot's Physics, or any other standard text-book of the same character. (4) Chemistry; (5) Geology; (6) Botany and Zoology; (7) Astronomy, *e.g.*, "Brinkley's Astronomy" (Stubb's edition).

Programme for University Examinations in Affiliated Schools and Colleges.

The Archbishops and Bishops of Ireland, at their meeting in the University Buildings, Stephen's Green, Dublin, on the 25th of June, 1874, resolved, that all University examinations, except the Final

examinations for Degrees, may be passed in the Affiliated Schools and Colleges, and at a subsequent meeting on the 15th October, 1874, approved the following programme: I. These examinations are three in number, viz., the Matriculation examination; the Scholarship; and the First examination for the B.A. II. At each of these examinations the successful candidates shall be divided into three classes, viz.: (*a*) Those *qui egregie satisfaciunt Examinatoribus*; (*b*) Those *qui bene satisfaciunt*; (*c*) Those who pass the examination. At the Matriculation examination, such candidates as do not aspire to distinction shall be examined in accordance with the present approved regulations of the University.

St. Patrick's House of the Catholic University (under the Direction of the Rev. Fathers of the Society of Jesus.)

The necessity has long been felt of a place where young gentlemen, the sons of families not residing in Dublin, who had completed their course in any of our Catholic Schools or Colleges might, with safety to faith and morals, continue their studies with a view to pursuing the higher branches of a liberal education, or to entering one of the learned professions, some higher department of the Civil Service, or the Army. St. Patrick's House of the Catholic University has been established to meet this want. The students are required to pass the Entrance, or Matriculation examination of the Catholic University, and to attend such lectures in Philosophy and Letters, or Science, as are necessary for the attainment of the special object they may have in view. Facilities of preparation for all public examinations are enjoyed by the students. The normal age of admission is from sixteen to twenty. The academical year or session begins on Monday in the second week of October, and ends in the second week of July, and is divided into three terms. No student is allowed to remain in St. Patrick's House during the long vacation, nor during the Christmas or Easter recess, without special permission. The students have separate rooms. The annual pension is £45. It is paid in three equal instalments of £15 each, and must be paid in advance on the first day of each term. No student is admitted for a period less than one term, and no reduction is made to students leaving during a term, unless in case of illness. The above mentioned sum includes the charge for board and lodging, for servants, and gas or candle light. All the rooms are furnished, but each student must provide himself with bed clothes, towels, &c. Injuries done to the room or furniture are charged to the occupant. Medicine, medical advice, and other casual expenses, are at the charge of the students.

Educating Bodies Granting Certificates.

Queen's College, Cork.

Matriculation Examination.—This is required to be passed by all students intending to compete for scholarships, and who wish to possess the other privileges of matriculated students, unless they are already matriculated students of some University. *Subjects*: *For the Faculties of Arts and Law*: Greek—Grammar and selected authors; Latin—selected authors; History, Greek and Roman; Geography, Ancient and Modern; English—Grammar and Composition; Mathematics—Arithmetic, Algebra to simple equations inclusive, Euclid, books i., ii. *For the Department of Civil Engineering*: The Outlines of Modern Geography; English Grammar; Mathematics—Arithmetic, Algebra to simple equations inclusive; Geometry, the subjects of the first four books of Euclid.

There is no accommodation for *residence* within the College. Students under twenty-one years of age are required to reside with their parents or guardians, or with some other approved person.

Fees.—Address the "Queen's College, Cork," for special information regarding these.

Scholarships.—There are thirty *junior scholarships* of £24 each appropriated to the Faculty of Arts; five of £20 each appropriated to the School of Engineering; three of £20 each appropriated to the Faculty of Law. Of the *senior scholarships*, seven of the value of £40 each are appropriated to the Faculty of Arts; one of £40 is appropriated to the Faculty of Law. All these scholarships are tenable for one year only, with the exception of the scholarships of the second year in Arts, which are tenable for two years. *Prises* are given in the different classes.

Students in the various Faculties can obtain the different degrees in their Faculties by passing the *examinations of the Royal University of Ireland*, or those of *the London University*. In the School of Engineering, this, however desirable, is not regarded as necessary to the proper completion of the student's curriculum. "The course of instruction prescribed is intended, in the first place, to provide the preliminary scientific training required by the young engineer; next, to give systematic teaching of those branches of practical work which can be taught in College so that when the student goes from the College into the office, he may be prepared to be of use in doing the work ordinarily expected from pupils of same standing." "The course of lectures is well adapted to give such a general scientific education as is suitable for the young man intended for manufacturing

or business life." "Students who complete their course in College satisfactorily will receive from the College a certificate of proficiency in Engineering science." The Engineering curriculum extends over three sessions; this period may be shortened if the candidates have already studied the science. The student will be required to pass examinations in the subjects of study.

There are three *terms* in each session; the first commencing in October and ending in December; the second commencing in January and ending in March; the third commencing in April and ending in June.

Queen's College, Galway.

Fees.—Minimum amount of fees payable in each case by students to the College and for attendance on the several prescribed courses of lectures and instruction:

	First Session.			Second Session.			Third Session.		
	£	s.	d.	£	s.	d.	£	s.	d.
For the degree of B.A.	9	10	0	7	5	0	8	5	0
If a scholar	5	0	0	3	15	0	4	5	0
For the diploma of Elementary Law	4	10	0	4	5	0	2	5	0
If a scholar in Law	2	10	0	2	5	0	1	5	0
For the degrees of LL.B. and LL.D.	13	10	0	11	5	0	10	5	0
If a scholar in Arts	9	0	0	7	15	0	6	5	0
If a scholar in Law	11	10	0	9	5	0	5	5	0
For the diploma of Civil Engineering	10	10	0	10	5	0	8	5	0
If a scholar	5	10	0	5	5	0	4	5	0

All fees are payable at the commencement of the first term in which the student enters.

Residence.—Students under twenty-one years of age must reside with their parents, guardians, or other approved person.

Scholarships, &c.—Thirty of £24 each for Arts students; three of £20 each for Law students; five of £20 each for Engineering students. Eight *senior scholarships*, value £40, each appropriated to the Faculties of Arts and Law. The College awards *exhibitions* varying in value from £12 to £20. Various *prizes* are also awarded.

Matriculation.—The *subjects* are: (1) Latin; (2) Any one of the following languages: Greek, French, German; (3) English; (4) Mathematics. In Latin and Greek, the books are announced beforehand; questions in the grammar of the languages are set, also historical questions. The Mathematical part of the examination is restricted to Arithmetic, Algebra, including simple equations, and the first two books of Euclid. The *fee* is 10s.

Junior Scholarships of the First Year.—Faculty of Arts: Ten of £24 each; five for proficiency in literary, and five for proficiency in scientific

studies. *The subjects of examination* for the Library scholarships are: (1) Latin; (2) Greek, French, or German; (3) English. *The subjects of examination* for the Scientific scholarships are: Arithmetic, Algebra, Geometry, Plane Trigonometry, Logarithms, Trigonometrical Tables. *Faculty of Law*: One *scholarship* of £20. *Subjects of examination*: (1) Law of Property; (2) Jurisprudence and Civil Law. *Faculty of Engineering*: Two *scholarships* of £20. *Subjects of examination*: The course prescribed for Science scholarship of the first year in the Faculty of Arts.

Queen's College, Belfast.

Students are divided into matriculated and non-matriculated.

Matriculation.—The Matriculation examination takes place at the commencement of the first term, on the days fixed in the "Calendar." Candidates at this examination will be required to answer in the following subjects: 1. Latin; 2. Any one of the following languages—Greek, French, or German; 3. English Language; 4. Elementary Mathematics; 5. Experimental Physics. The following are the particulars of the foregoing subjects of examination: *Latin*: Virgil, Æneid, book i.; Cæsar, De Bello Gallico, books iv., v.; Latin Grammar; Easy Sentences for Translation into Latin; Outlines of Roman History. *Greek*: Homer, Iliad, books i. and iii.; Xenophon, Anabasis, books iii. and iv.; Greek Grammar, Outlines of Greek History. *French*: French Grammar, two short works. The books for the present are: Fénélon, Les Aventures de Télémaque, books i., ii., and iii.; Racine, Esther; Easy Sentences for Translation into French. *German*: Grammar: two short works. The books for the present are: Schiller, Wilhelm Tell, act i.; Lessing, Fabeln; Easy Sentences for Translation into German. *English*: Shakspere, Macbeth; Johnson, Lives of Dryden and Pope; English Grammar and Elements of the History of the English Language; a prescribed period of English Literature—the period for the present will be, 1600 to 1700; Composition. *Mathematics*: Arithmetic—Principles of Notation and the Four Rules; Vulgar and Decimal Fractions; Ratio and Proportion; the Rule of Proportion and its applications; Extraction of the Square Root. Algebra—Definitions and Explanations of Algebraic Signs and Terms; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities and Algebraical Fractions; Simple Equations not involving more than two unknown quantities. Geometry—Euclid, books i. and ii., or the subjects thereof, *Experimental Physics*: The Elementary parts of Mechanics, Hydrostatics, and Pneumatics.

Students who have passed the Matriculation examination of any university capable of granting degrees in Arts, Law, and Medicine,

will be admitted, *ad eundem*, as matriculated students of this College, provided they pass the Matriculation examination of this College in any subjects not included in the examination they have already passed. Matriculated students of the Royal University of Ireland will be admitted as matriculated students of this College. It shall be competent to the Council to permit any student who shall have pursued part of his collegiate studies in one of the Queen's Colleges, or in any university capable of granting degrees in the several faculties of Arts, Law, and Medicine, on passing such examinations and fulfilling such other conditions as the Council shall prescribe, to take corresponding rank in this College, and also to compete for scholarships or other prizes of the corresponding year, provided he shall not hold at the same time a scholarship or other office of emolument in any other university, college, or medical school.

School of Engineering.— Subjects of Matriculation examination: Grammar—English and Composition; Geography—Modern, Outlines of; Mathematics—same as for other matriculated students.

Fees.—Matriculation fee, 10s. This fee is not required from students admitted *ad eundem*. College fee, payable by every student (matriculated or non-matriculated), 10s. Candidates for scholarships are required to pay to the Bursar, in addition to the College fee, half the class fees in their respective courses, before they can be admitted to the examinations. All students not scholars, matriculated or non-matriculated, must pay the whole of the fees before their names can be entered on the class rolls. *Fees payable by Students attending Classes* (each re-attendance on the same course, half fee, except where noted): Greek, £2; Latin, £2; English Language and Literature, £2; French, £2; German, £2; History, £2; Logic, £2; Metaphysics, £2; Political Economy, £2; Mathematics, £2; Zoology and Botany, £2; Mineralogy and Geology, £2; Geometrical Drawing, £2; Engineering, £2; Office and Field Work, £2; Mathematical Physics,* £2; Experimental Physics,* £2; Natural Philosophy applied, £2; the Law of Property, £2; Jurisprudence, £2; Equity and Bankruptcy, £2; Civil Law, £2; Common and Criminal Law, £2; Law of Evidence and Pleading, £2; Constitutional, Colonial, and International Law, £2; Medical Jurisprudence, £2; Chemistry, £2; Practical Chemistry, £3—re-attendance, £3; Anatomy and Physiology, £3—re-attendance, £2; Practical Anatomy, £3 — re-attendance, £3; Materia Medica, £2; Practice of Medicine, £2; Practice of Surgery, £2; Midwifery, £2.

* If the classes of Mathematical Physics and Experimental Physics in the Second year are taken together, the fee for both is £2.

Scholarships, &c.—Thirty, appropriated to Arts students, value £24 each; three of £20, appropriated to Law students; eight of £25, appropriated to Medical students; five of £20 each, appropriated to Civil Engineering students. Beside the above there are eight *senior scholarships* of the value of £40 each; two *Pakenham scholarships*, value £25 each; three *Sullivan scholarships*, value £40 each; two *Porter scholarships* of £50; two *Dunville studentships*; and various *exhibitions* and *prizes*.

ROYAL COLLEGE OF SCIENCE (*Stephen's Green, Dublin*).

Instruction.—The Royal College of Science supplies, as far as practicable, a complete course of instruction in Science applicable to the Industrial Arts, especially those which may be classed broadly under the heads of Mining, Engineering, and Manufactures, and is intended also to aid in the instruction of teachers for the local Schools of Science.

The *session* commences on the first Monday in October, and lasts until 21st June following. Vacations of one fortnight at Christmas and a week at Easter are allowed.

The *first term* commences on the first Monday in October, and the *second term* on the first Monday in February.

Students may enter as *Associates* or *Non-Associates*. By "Associate students" is meant all those who enter for the three years' curriculum of the College. An Associate student must pass, at the Sessional examinations, in the subjects taught during the year before proceeding to the next year's course, and, in the event of failure, may either re-enter for the Associate course or proceed as a Non-Associate student.

Diploma of Associate of the Royal College of Science.

Associate Students.—The course of instruction for students desirous of obtaining the diploma of Associate of the Royal College of Science extends over three years, each year being divided into two terms. In the first year the instruction is general. In the following years it is specialised under the heads of Mining, Engineering, and Manufactures. Students entering for the Associateship are expected to be acquainted with the first three books of Euclid and the elementary rules of Algebra. Some familiarity with the use of the ordinary drawing instruments is very desirable. In their first year Associate students are required to attend all the courses in the subjects appointed for the year, viz.:

First year.—*1st term*: Pure Mathematics, Descriptive Geometry, Geometrical Drawing, Chemistry (Theoretical). *2nd term*: Applied

Mathematics, Physics (Theoretical), Descriptive Geometry, Geometrical Drawing.

In their *second* and *third years* Associate students are required to attend all the courses belonging to any one division, as follows: *Division A*: *Mining*: *Second year*: *first term*: Drawing, Pure Mathematics and Exercises, Chemistry (Practical), Biology. *Second term*: Drawing, Chemistry (Practical), Applied Mathematics and Exercises, Physics (Practical). *Third year*: Geology and Palæontology, Mining and Mineralogy, Metallurgy and Assaying, Mechanism and Thermodynamics, Surveying. *Division B*: *Engineering*: *Second year*: *First term*: Drawing, Mineralogy, Pure Mathematics and Exercises, Chemistry (Practical), Biology. *Second term*: Drawing, Physics (Practical), Applied Mathematics and Exercises. *Third year*: Applied Mechanics, Mechanism and Thermodynamics, Mechanical Drawing, Engineering, and Surveying, Geology and Palæontology. *Division C*: *Manufactures*: *Second year*: *First term*: Drawing, Mineralogy, Pure Mathematics and Exercises, Chemistry (Practical), Biology. *Second term*: Drawing, Chemistry (Practical), Applied Mathematics and Exercises, Physics (Practical). *Third year*: Mechanism and Thermodynamics, Applied Chemistry and Analytical Chemistry. Students in this Faculty, by obtaining permission from the Council, may attend the lectures in Geology. The *diploma of Associateship* of the College is given to students who, having attended three-fourths of the number of lectures in each of the three years, pass in all the subjects of the first year, and in those of any one division of the second and third years. They will be required to take the higher Pass, or "Pass with Credit," in the following subjects: *Division A*: Geology, Mining, Metallurgy. *Division B*: Applied Mathematics (one course), Drawing, Engineering. *Division C*: Applied Chemistry, Analytical Chemistry.

Non-Associate and Occasional Students.

Students may also enter for the separate courses, and receive *certificates* after examination, if they have attended two-thirds of the entire course of lectures. A certificate of attendance in the Chemical or Physical Laboratory is not given for any course of less than three months.

Fees for Non-Associates.—The fees payable by Non-Associate students are—£2 for each separate course of lectures; for Analytical Chemistry, £2 for a special course of one month, £5 for three months, £9 for six months, or £12 for the entire session; for Assaying, £5 for three months, £9 for six months, or £12 for the entire session; for Physical Laboratory Practice, £1 per month, or £6 for the session; for Bio-

logical Laboratory, £2 for the term; for Drawing School, £3 for the session, or £2 for one term.

Fees for Associates.—Students entering for the purpose of obtaining the diploma of Associate, or intending to compete for the scholarships, pay the following fees, viz.: *First year*: Lectures, £10; Drawing, £3—£13. *Division A, Mining*: *Second year*: Lectures, £10; Chemical Laboratory, £6; Physical Laboratory, £3; Biological Laboratory, £2—£21. *Third year*: Lectures, £10; Assaying, £4—£14. *Division B, Engineering*: *Second year*: Lectures, £10; Chemical Laboratory, £5; Physical Laboratory, £3; Biological Laboratory, £2—£20. *Third year*: Lectures and Field Work, £10; Drawing School, £2—£12. *Division C, Manufactures*: *Second year*: Lectures, £10; Chemical Laboratory, £6; Physical Laboratory, £3; Biological Laboratory, £2—£21. *Third year*: Lectures, £4; Analytical Chemistry, £10—£14. The above fees include all the courses of the respective years. Students wishing to make one payment for the whole three years' courses of lectures are allowed to compound for £25, which is in addition to the laboratory fees above stated. The fees are in all cases payable in advance. The holders of Royal scholarships or Royal exhibitions pay no fees.

A non-Associate student taking out a complete course of instruction in any Faculty will be admitted at the fees charged to non-Associate students.

The courses of Chemistry, Botany and Zoology are recognised by the Royal University of Ireland, and certificates of attendance are granted to Medical and other students attending the courses, and the Chemical, Botanical and Zoological Laboratories.

Prizes, Scholarships, Medal.

Prizes of the value of £2 and £1 may be awarded in the several subjects of instruction to approved candidates upon the result of the Sessional examination. These prizes are open to both Associate and non-Associate students.

Four *Royal scholarships*, tenable for two years, each of the value of £50 yearly with free admission to the lectures and laboratories, are attached to the College. *Two* are offered for competition *each year* to students, not being Royal exhibitioners, on the completion of their first academic year. In order to qualify for them a student must attend at least three-fourths of the lectures and demonstrations of the first year, and pass in all the subjects of that year, and in at least two of them the Pass must be "with credit." The holders of the scholarships are required to attend with strict regularity all the courses of their respective years, and to pass the Sessional examinations.

A *silver medal* will be awarded at the conclusion of the second year.

Exhibitions and Free Admissions.

There are nine *Royal exhibitions*, each of the value of £50 per annum, entitling the holder to free admission to all the lectures, and to the laboratories, to be held from year to year for three years, on the condition that the holder attends the lectures regularly during those years, and passes the examinations required for the Associateship of the College. Three of the above Royal exhibitions will be open for competition annually, at the May examinations of the Science and Art Department. The conditions under which they are obtainable will be found in the Directory of the Science and Art Department, which may be obtained on application to the Secretary, South Kensington.

Free admission to the lectures at the College is granted to any person who takes a gold medal in the May examinations of the Science and Art Department. Persons who have taken a first or second-class certificate in the Advanced Stage in any subject of science in the examinations of the Science and Art Department, and who show that they are *bonâ fide Science teachers*, may attend the day lectures gratuitously, provided that they be examined in at least one subject, paying a fee for such examination of £1 per course.

Exhibitioners and all other free students are required to attend with strict regularity all the courses of their respective years, unless exempted by special permission of the Council, to conform to the rules of the College, and to pass the Sessional examinations. In case of illness, a medical certificate should at once be forwarded to the Secretary.

Evening Classes.—Systematic courses of Evening Lectures on the various branches of science taught in the College are voluntarily given by most of the professors throughout the session.

Royal Irish Academy of Music.

The institution is conducted as nearly as possible on the same plan as the Continental Conservatoires. The annual subscription, entitling to attendance at all the concerts, is £1. In the Ladies' Pianoforte and Vocal Classes there are two scales of fees; the lower, at the rates given in the prospectus, for those who state their intention of studying Music for professional purposes, or their inability to pay the higher scale. The higher scale for all others.

Fees.—Ladies' classes: Pianoforte classes: lower scale—first class,

£10 per annum; second, £7; third, £5. Higher scale—first class, £12; second, £9; third, £6. Evening class, £5 per annum. Singing classes: lower scale, £7 per annum; higher scale, £9 per annum; Italian language, 10s. per annum; Violin class, £5; Harmony, 10s.; Singing at Sight (morning), 10s.; Organ classes, ladies' and gentlemen's: first class, £10 per annum; second class, £7 per annum; Choir class, £1 per annum. *Gentlemen's classes*: Singing (evening), £7 per annum; Violin classes, £5; Violoncello, £5; Wind Instruments, £4. Pianoforte (morning and evening): Senior class, £10 per annum; second class, £7; junior class, £5. Harmony, 10s. per annum. Diplomas for proficiency and certificates of attendance are given to such of the pupils as the Council may deem entitled thereto.

CHAPTER IV.

SCOTTISH UNIVERSITIES.

Universities of Edinburgh, Glasgow, St. Andrew, and Aberdeen.

UNIVERSITY OF EDINBURGH.

*The Curriculum in Arts.**

THE ordinary curriculum in the Faculty of Arts with a view to a degree extends over *four winter sessions*, and comprehends attendance on all the classes enumerated in No. I. of the *Regulations for Graduation in Arts.*

By No. II. of the *Regulations*, students who pass an Entrance examination in Latin and Greek, sufficient to satisfy the Faculty that they are qualified to be admitted to the higher classes of Latin and Greek, may complete the curriculum in Arts, with a view to graduation, within *three winter sessions* in terms of that regulation; and students who pass the Entrance examination in Mathematics may dispense with a second session of attendance at the Mathematical classes.

Students who desire, in accordance with *Regulation* No. II., to be freed from a second session of attendance in the Latin and Greek Classes, in order that they may thus be enabled to complete the curriculum in Arts, with a view to a degree, within three winter sessions, must present themselves for examination in Latin and Greek at the commencement of the first session of their attendance in the University.

Students who, in accordance with the same regulation, desire exemption from a second session of attendance in Mathematics, must also present themselves for examination at the commencement of their first session.

* The expense, for class fees, matriculation, &c., of the regular course in Arts may be estimated at about £10 10s. in each session.

For the subjects of examination in Latin, Greek, and Mathematics, see under *Entrance Examination for Curriculum of Three Sessions.*

Classes in the Faculty of Arts.

I. HUMANITY (*Latin*).—*Junior Class*: The work of the class consists of—1. Daily readings and explanations of parts of Virgil, Horace, Livy, Cicero, Tacitus (Agricola, or Germania), occasionally Terence, or Tibullus. 2. Oral examinations and occasional lectures on Roman History and Antiquities. *Books recommended*: Merivale and Puller's "School History of Rome," or Liddell's "Student's History of Rome"; "Rome to its Capture by the Gauls," in "Epochs of Ancient History"; Ramsay's "Elementary Manual of Roman Antiquities." 3. Exercises in Latin Prose Composition. 4. Written Examinations—partly on the subjects prepared for the class, partly on subjects prescribed for voluntary reading.

Senior Class.—The work of the class consists of: 1. Readings and explanations of parts of Virgil, Horace, Juvenal or Plautus, Cicero (Letters, or Speeches), Tacitus (Annals, or Histories). 2. Lectures and Prelections in Roman Literature. 3. Exercises in Latin Prose, and voluntary Exercises in Latin Verse. 4. Written examinations—partly on the books read and the lectures delivered in the class, partly on books and portions of Roman History prescribed for voluntary reading. *Books recommended*: Merivale's "General History of Rome"; "The Roman Triumvirates" and "The Early Roman Empire," in "Epochs of Ancient History"; Nichol's "Tables of Ancient History"; and Cruttwell's "History of Latin Literature."

Third Class.—The third Latin class meets every alternate year. It is intended to direct the studies of candidates for University scholarships and Honours in graduation. The work of the class consists of: (1) Readings and explanations of the more difficult Latin authors, such as Tacitus, Lucretius, Plautus, &c. (2) Lectures on Roman History and Literature chiefly in connection with the authors read in the class. (3) Essays (English and Latin) on questions arising out of the lectures or books read, and exercises in Latin Prose Composition. (4) Written examinations on the work done in the class, and on subjects prescribed for voluntary reading.

II. GREEK.—*First Class*: Some easy Greek prose writer, as Xenophon, Lucian, or Cebes; Homer; daily exercises in Greek Prose Composition and conversation; descriptions of objects in Greek; Clyde's Greek Syntax; Blackie's Greek Dialogues.

Second Class.—Plutarch, Thucydides, Herodotus, or Lucian; a play of Euripides, Æschylus, or Sophocles; Homer; exercises in Greek Prose Composition. Expositions or lectures once a week.

III. MATHEMATICS.—*First Class*: Theory of Arithmetic; Plane Geometry equivalent to Euclid, books i., ii., iii., iv., and vi. (in the lectures the arrangement of the Syllabus of Plane Geometry, prepared by the Association for the Improvement of Geometrical Teaching, is followed more or less closely); Solid Geometry, equivalent to Euclid, book xi.; Geometrical Conic Sections; and Elementary Algebra.

Second Class.—Algebra, including the elements of the Theory of Equations, and of Determinants; Plane Trigonometry; Conic Sections, treated geometrically and analytically; and the Elements of Modern Geometry.

Third Class.—On Mondays, Wednesdays, and Fridays: Higher Algebra, Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. Additional lectures on Quaternions, and other special subjects may be given occasionally.

Tutorial Classes.—In addition to the ordinary class lectures in the first and second classes, occasional lectures are given by the class assistant. The attendance on these is voluntary, and the time is devoted to the repetition of parts of the class lectures and to the working of examples.

Home Exercises are prescribed weekly in all the classes.

Written Examinations on the class lectures are held monthly during the session. The class honours are determined solely by these examinations.

Text Books.—As a rule, special text books are not prescribed; but the student is recommended to select from the following list: Geometry: Wilson's "Elementary Geometry," or Todhunter's or Playfair's edition of Euclid's Elements. Algebra: Kelland or Todhunter. Solid Geometry and Conic Sections: Wilson. Trigonometry: Todhunter (smaller or larger treatise) or Snowball. Analytical Geometry: Todhunter's or Turnbull's "Analytical Conic Sections." Students intending to take the third class are recommended to get Salmon's "Conic Sections." Higher Algebra and Theory of Equations, &c.: Todhunter's "Theory of Equations," and Salmon's "Higher Algebra" for those who mean to read for Mathematical Honours. Differential and Integral Calculus: Williamson's Treatises.

IV. LOGIC AND METAPHYSICS.—*Junior Class*: The Junior course comprehends lectures on Psychology and Logic. I. *Psychology*: *General*, or an account of the Constitution of Human Nature—(1) As spiritual or introspectively revealed—Metaphysical Psychology; and (2) as organic or discovered by observation—Physiological Psychology. *Special*, or an examination of the Faculties of Intellect implied in the growth and constitution of Human Knowledge—in perception of

phenomena and phenomenal things in Sense—in representations of Memory and Imagination under laws of mental Association—in inductive and deductive inferences of Discursive Thought — all ultimately constituted and regulated by Intuitive Reason or Rational Faith. II. *Logic*: *Formal*, or the criteria of Verbal Consistency in Discursive Thought, including the forms of Proposition and Syllogism, the laws of Definition and Division, and Fallacies. *Material*, or the criteria of Experiential Proof, including the principles of evidence which determine the scientific interpretation of Nature by Induction and Deduction, and also the laws which regulate the credibility of human Testimony and Authority. Essays are proposed, and written as well as oral examinations are held in connection with these lectures. The Professor's volume of "Selections from Berkeley" is used for exercise in psychological analysis. Jevons's "Elementary Lessons in Logic" may be read, as previous preparation in that subject, by those intending to join the Junior Class.

Senior Class. — III. *Metaphysics and History of Philosophy.* — Systematic lectures on Metaphysical Philosophy and its history, intended for advanced students, in further development of the last chapter in the Professor's "Berkeley" (Blackwood, 1881), and partly based on the books proposed for Honours at graduation, and for the Vans Dunlop Scholarship examinations in Logic and Metaphysics, will be given on Mondays and Thursdays, at three o'clock. *Bruce of Grangehill and Falkland's prize* is given annually as the highest honour in this class.

V. MORAL PHILOSOPHY.—*Ordinary Class*: The following are the subjects embraced in the course of Moral Philosophy: *Introduction*: Province and Aim of Moral Philosophy. 1. *Psychology of Ethics*: Knowledge of Moral Distinctions; the Moral Faculty; Impulses to Action; Restraints upon Action; the Will; Moral Sentiments Accompanying Moral Judgments and Moral Actions; the Disorder of Moral Nature. 2. *Metaphysic of Ethics*: The Being of God; His Attributes; His Moral Government; the Foundation of Virtue; the Relation of Divine Sovereignty to Free Will; the Relation of Human Desire to Divine Sovereignty; the Origin of Evil; the Immortality of the Soul. 3. *Applied Ethics*: Man's Position in the World; Guidance of Man as an Individual; Laws Regulating the Formation of Moral Character; Guidance of the Individual as a Member of Society; Inferential Maxims of Moral Life; Guidance of the Community; Natural Religion; Inferential Maxims of Moral Life. 4. *The History of Moral Philosophy*: The Rise of Philosophy; Distinction of Moral from Intellectual Philosophy; Development of Systems of Moral Philosophy

in Ancient and Modern Times, with their relations to General History. The course is devoted to lectures, oral and written examinations, and essays. *Text books*: The Professor's "Handbook of Moral Philosophy," and Kant's "Metaphysic of Ethics." *Books recommended for Reading*: Zeller's "Socrates and the Socratic Schools," and "Stoics, Epicureans and Sceptics," Sir Alexander Grant's "Ethics of Aristotle," and Macintosh's "Dissertation," Price's "Principal Questions in Morals," Reid's "Active Powers," and Mill's "Utilitarianism."

Advanced Class.—This class is intended for those who have gone through the ordinary course in Moral Philosophy, and wish to carry their studies further. The subjects of study are the following: The Ethical System of Socrates as presented in Xenophon's "Memorabilia," and in Plato's "Protagoras" and "Apologia;" the Moral System of Plato as developed in the "Republic;" Aristotle's "Nicom. Ethics;" the rise of Modern Philosophy; the "Method and Meditations" of Descartes; Spinoza's "Ethics;" Kant's Ethical System; the place of Moral Philosophy in Hegel's Theory; the development of Utilitarianism.

VI. NATURAL PHILOSOPHY.—*Ordinary Class*: The subjects embraced in the course of Natural Philosophy are the following: 1. Properties of Matter—including Inertia, Gravitation and Molecular Forces. 2. Abstract Dynamics—including Kinematics, Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with their applications. 3. Sound, and Wave-propagation in general. 4. Heat, with its application to the Steam Engine, &c. 5. Light (Geometrical and Physical Optics). 6. Electricity, including Frictional and Voltaic Electricity, Thermo and Magneto-Electricity, Electro-Dynamics, and Magnetism, with their practical applications to the Telegraph, &c. 7. Conservation of Energy. 8. Plane and Physical Astronomy. 9. Meteorology. Properties of Matter, Abstract Dynamics (commonly called Mechanics), and Conservation of Energy, together with two or three others of the above divisions of the subject, are treated in detail every session, the remainder being necessarily discussed in a more superficial manner, as it is impossible to enter at length into all in the course of a single session. The whole class is examined at short intervals during the session upon the subjects already treated in the lectures; and a prize is given for the best answering. In these examinations no Mathematics are requisite, except the most elementary portions of Arithmetic, Algebra, and Geometry. In the months of January and March there are special examinations upon prescribed subjects; and, on these two occasions only, the class is divided into two parts—the division depending

mainly upon the students' proficiency in Mathematics. In the Lower Division, the elements of Algebra and Geometry alone are required; in the Higher Division, Algebra, Geometry, and the Geometry of the Conic Sections, are necessary. [In former years, the Ordinary Class was arranged in *three* divisions, but the introduction of the Advanced Class (see below) has rendered the highest of these three superfluous.] The prizes in each division of the Class are determined by adding the marks obtained in the two sets of examinations above described. No student who has obtained a prize in either division of the class can be allowed to compete, in a subsequent session, for a prize in the same or in a lower division. The *text-book* for the course will be Thompson and Tait's "Elements of Natural Philosophy" (Pitt Press, Cambridge, second edition, 1879). But, as the first volume only has yet been published, for the remainder of the subject the student may consult Balfour Stewart's "Lessons in Elementary Physics," and Tait's "Recent Advances in Physical Science." Throughout the experimental part of the course, constant references will be made to Tait's "Sketch of Thermodynamics" (second edition, 1877), which has been prepared as a text-book to serve till the second volume of Thomson and Tait's "Elementary Treatise on Natural Philosophy" is published.

Advanced Class.—For the benefit of Engineering students, and of Arts students wishing to graduate with Honours in the Department of Mathematics, Professor Tait has opened an Advanced Class. Three lectures are given per week, and the subjects are—Dynamics (generally), Theory of Heat, Theory of Electricity, all treated specially with regard to their practical applications.

Summer Class for Medical Students.—At the request of the Medical Faculty, Prof. Tait, in the years 1875-76, tried the experiment of opening an elementary class of Experimental Physics in the summer session, chiefly for medical students. The formation of this class is now made conditional upon its being shown, by the enrolment of at least fifty names during the first week of May, that there is a real demand for a summer course of Natural Philosophy on the part of students who are unable to attend the ordinary winter class.

Physical Laboratory.—Here students may acquire a practical knowledge of the construction of, and manner of using, physical apparatus, with the mode of conducting experimental inquiries. The Laboratory is open for five or six hours daily during the winter and summer sessions, under the personal superintendence of the professor and his class-assistant. It is hoped that, with the valuable collection of apparatus in the Museum, results of real use to science may be obtained.

VII. RHETORIC AND ENGLISH LITERATURE.—The business of this class will comprehend—1. A course of lectures on *Rhetoric* and the *Principles of Literature*. A portion of this course will consist of Lectures on Style and the more minute points of English Composition; after which there will be a systematic exposition of the principles and methods of Literature in each of its leading kinds successively, in the following order: (1) Historical and Descriptive Literature; (2) Expository or Didactic Literature; (3) Eloquence and Oratorical Literature; (4) Poetry and the Literature of Prose-Fiction. The course will be illustrated throughout by critical references to important authors, and by examples from their writings. 2. A course of Lectures on the *History of English Literature*. This course will include a complete chronological survey of British Literature from the earliest times to the present, divided into periods. Under each period will be furnished a list of all its writers of any note; the lives and writings of the more important or representative poets and prose-writers of each period will be reviewed more at large; and the general aim will be to exhibit the successive movements and variations of our literature in their connexions with the course of our national and social history. It will also be so arranged that the course shall include a view of the history of the English Language, from "Anglo-Saxon," through Early English and its Dialects, to present English. 3. *Instruction in English Composition, &c.* During the greater part of the session, one of the meetings in each week will be devoted to practical work of various kinds, including examinations, readings by the students themselves, and brief written exercises to be done by them in the class-room. Subjects will also be prescribed for more extensive essays to be written at home. There will be *prizes* for merit in the essays, in addition to the other class prizes. *Books recommended*: Aristotle's "Rhetoric," Bain's "English Composition and Rhetoric," Morley's "First Sketch of English Literature," "Three Centuries of English Poetry," Morris's "Historical Outlines of English Accidence," Sweet's "Anglo-Saxon Reader."

VIII. PRACTICAL ASTRONOMY.—The Professor of Practical Astronomy is also, by one and the same act of appointment under Her Majesty's hand, Astronomer-Royal for Scotland; and has, in consequence, daily duties of a very onerous character, and wholly unconnected with the University, to perform throughout the year in the Royal Observatory, Edinburgh, on the Calton Hill. Nor has this chair ever been taken up by the University authorities and made necessary for graduation in any of the Faculties, nor supplied with efficient apparatus, nor found at any time to have a sensible amount of demand

for it among the students in general of the University. Hence the present Professor Astronomer-Royal, after having voluntarily tried the experiment of giving a course of Practical-Astronomy Lectures, and kept it up for several laborious years, whenever there were only two students to hear—has limited himself of late to *receiving* (on a day announced in the University Calendar) any matriculated applicants for practical Astronomy, ascertaining in a friendly manner something of their calibre and objects, and then advising or assisting such gentlemen afterwards in their studies, at various periods through the session, according to circumstances, and hitherto gratuitously. Nor can he now, in the enlarged sphere of his public duties at the Royal Observatory, devote more of his time to extraneous occupations without that Government office committed to his care suffering serious damage.

Classes in the Faculty of Science.

1. AGRICULTURE AND RURAL ECONOMY.—The course of lectures comprises two divisions: the first part of the course treating mainly of the *Principles*, and the second of the *Practices* of Agriculture. *First Division*: *History of Agriculture*: General purposes of Agriculture; conditions affecting it; and scientific principles on which it is based. These latter comprise: 1. The *Chemistry of Agriculture*, including the Constituents and Analytical Composition of Soils, and of the Cultivated Plants; the Composition and Physical and Chemical Agencies of the Atmosphere, and of Water; the Composition and Application of Manures, Organic and Inorganic, Feeding Stuffs, &c. 2. The *Geology of Agriculture*, including the Formation of Soils, their Classification—Chemical and Physical Characters, and suitability for the Growth of different Crops—their Economic or Industrial Characters. 3. The *Botany of Agriculture*, including "Our Farm Crops," or Crops cultivated for Food and for industrial purposes—Cultivation of Forest Trees—Formation and Management of Plantations, &c. 4. The *Physics of Agriculture*, including Meteorology, or the Laws of Climate: Light, Heat, &c., as influencing Plant Life. *Second Division*: The *Mechanics of Agriculture* and their application to the different descriptions of Machines, Implements and Labour required on a Farm—Steam Tillage—Sequence of Agricultural Operations—Economical Division of Labour—Rotations of various districts discussed and explained—Improvements of the Soil by Draining, Manuring, Liming, &c.—Live Stock. The *Economics of Agriculture*—Farm Engineering and Construction—Agricultural Policy—General Management and Improvement of Landed Property.

2. MUSIC.—1. Lectures given will be on some of the following

subjects: Harmony; History and Development of the Art and Science; various schools and styles of Music; History and construction of some of the principal Musical Instruments; the modern Orchestra, &c.; or on the works of the great masters. Organ Performances, with instructive remarks or programmes will be given from time to time during the session. 2. Separate and individual instruction in Organ or Pianoforte playing given to a certain number of younger students. To these, the Theory of Music is practically imparted.

3. SANSKRIT AND COMPARATIVE PHILOLOGY.—A. *Sanskrit Language and Literature.*—1. *Junior Class*: Grammar and Exercises—Easy Sanskrit Texts such as the Hitopadesa and selections from the Epic Poems—Easy translations from English into Sanskrit. 2. *Senior Class*: Repetition of Grammar—Translations from English into Sanskrit—Sanskrit Texts such as Kalidasa's Raghuvansa or Sakuntala, Mrichchhakatika, Manu's Institutes of Law—Selected Hymns of the Rigveda. 3. *Sanskrit Literature*: A general view of Sanskrit Literature will be given in special lectures. B. *Comparative Philology*: A course of lectures will be delivered on the principles of Indo-European Comparative Philology, and the progress of Linguistic Studies, provided that a sufficient number of students or matriculated persons be willing to attend the same. These lectures (as well as those on Sanskrit Literature) will be free to students attending either of the Sanskrit classes.

4. ENGINEERING (CIVIL AND MECHANICAL).—*Winter Session.*—I. *Class of Engineering*: The object of the course will be to show the practical application of science to some branches of Engineering. The series of lectures will form a two years' course, so arranged that students can enter on the course at the beginning of either year, and should they attend for one year only, will receive instruction in the four following sub-divisions of the subject matter. (1) Applied Mechanics; (2) one branch of Civil Engineering; (3) one branch of Mechanical Engineering; (4) a series of examples of the Application of Machinery to Manufacturing Purposes. The following is a synopsis of the lectures for the session: 1. Principle of Statics; couples; moments of forces, parallel and inclined forces; centre of gravity; moments of inertia. 2. Hydrostatics. 3. The principles of Dynamics. 4. Hydrodynamics. 5. Arrangement and construction of waterworks for the supply of towns. 6. Drainage and sanitary arrangements. 7. Pumps, turbines, and water wheels. 8. Mill-work and gearing; spur and bevil wheels. 9. Efficiency of various modes of transmitting power. 10. Locomotives. Four examinations are held

during the session, and each week, when examinations are not held, voluntary exercises are given to be worked at home. The questions in these exercises are such as are met with in the practice of Engineering, and being returned annotated and corrected to the students, form a body of examples for subsequent reference. Engineering works and factories will be visited by the class, under the guidance of the professor.

II. *Class of Mechanical Drawing.*—Students can attend the drawing class between 10 and 1 each day. The work will be examined and instruction given at 10 o'clock, after the conclusion of the Engineering Class; the class will at other times be taught by an assistant, who will attend from 10 to 1. The Drawing Class may be attended by students who are not following the Engineering Class, and especially might be attended with advantage by those students who propose in subsequent years to attend the Class of Engineering, as it is of much importance to the student that he should be able readily to understand the diagrams of machinery, and to apply the graphic methods of calculation employed by the engineer. The examples given to the students are of a practical character, consisting chiefly of actual working engineering drawings. They are also taught to make drawings from the details of actual machines.

Summer Session.—III. *Practical Surveying*: A short course of Practical Surveying, Levelling, Contouring, and Setting Out will be given every second year. Lectures on the instruments employed will be delivered during one fortnight in the class-room of the University, and these lectures will be followed by a fortnight's practical work in the field. This practical work will require the whole of the students' time during each day; and hence the number of hours during which instruction is given will correspond to an ordinary course extended over a much longer period. *Course of Study*: The following course of study is recommended: *First year*: Mathematics (First Class), Geometrical Drawing, Chemistry. *Second year*: Mathematics (Second Class), Natural Philosophy, Engineering, Mechanical Drawing. *Third year*: Surveying and Levelling (Summer session), Natural Philosophy (Advanced Class), Engineering. If the student is sufficiently well prepared, the first year's course may be dispensed with, with the exception of Chemistry.

5. GEOLOGY AND MINERALOGY. — This course embraces a system of instruction in the following subjects: 1. *The History of Geology*—an outline of the growth of the science from the time of the early cosmogonies downwards. 2. *Astronomical Geology*—an account of speculations as to the origin of the earth, and a discussion of the

planetary relations of the globe from a geological point of view. 3. *Physical Geography*—a description of the parts of the earth; land, water, air, and of their co-operation in maintaining the life of the planet. 4. *Dynamical Geology*—a discussion of the nature and causes of geological changes effected on the surface and within the interior of the earth. 5. *Mineralogy*—an account of the physical and chemical characters of minerals, and a systematic description of some of the more important and typical species in the different mineral groups. 6. *Petrography*—a description of the various families of rocks, arranged according to chemical and microscopic analysis, and geological position. 7. *Geotectonic Geology*—a description of the geological structure and relations of rock-masses to each other, as in unconformability, overlap, faults, joints, cleavage, metamorphism, &c. 8. *Physiographical Geology*—an inquiry into the origin of the present outlines of the earth's surface. 9. *Palæontological Geology*—an account of the nature and use of Fossils in Geological inquiry. 10. *Stratigraphical Geology*—the history of the successive geological periods, as based upon the organic remains and lithological features of the various systems and formations of rocks. The applications of Geology to Engineering, Agriculture, Mining, and other practical pursuits, are described and illustrated. A small museum is attached to the class, exhibiting the characters of minerals and rocks, and the typical fossils of the different formations. Practical instruction is given in the determination of minerals by blowpipe analysis, and in the microscopic examination of minerals and rocks. Advantage is taken of the peculiar facilities afforded by the position of Edinburgh for the study of Geology, and short excursions are made during the session to places of geological interest in the vicinity, when the class-lectures are illustrated by demonstrations in the field, and practical instruction is given in geological surveying. At the close of the session an excursion, extending over a week or ten days, is made for the purpose of examining the geological structure of a more distant district. In this way Arran, part of the Grampian Mountains, the Kincardineshire coast-cliffs, the Parallel Roads of Glen Roy, the rocks of Ballachulish, Glencoe, the east of Fife, the shores of the Moray Firth, and other districts have been already visited by the class. *Text books*: "Text-Book of Geology," by the Professor (Macmillan and Co.); "Elementary Lessons in Physical Geography" (Macmillan's School Class-book Series); Rutley's "Mineralogy" (Murby's Science Class-books). More detailed works of reference, most of which will be found in the College reading room, are recommended for each branch of the lectures.

6. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE

LAW.—1. *Economics*: Production, Exchange, Distribution and Consumption of Wealth; Value; Labour and Capital; Wages, Profits, Interest, Rent; Effects of Division of Labour and Machinery; Money; Credit; Combinations, Strikes, and Lock-outs; Competition, Co-operation, Arbitration; Population; Emigration; Poor-Laws; Taxation; Land Tenures, &c., &c. 2. *Commerce*: History of Ancient, Modern, and especially British Commerce; Home and Foreign Trade; Imports and Exports; Colonies; Emigration and Immigration; Tariffs; Effects of Free Trade and of Restrictions, Bounties, &c.; Money, Credit, Banking; Commercial Products; Manufacturing centres, and commercial emporiums at home and abroad; Loans and Securities, Stock and Share Broking; Exchanges; Insurance; Direct and Indirect Taxation, &c., &c. 3. *Mercantile Law*—Contracts; Insurance; Banking; Shipping; Bankruptcy; Bills of Exchange, &c.; Agency; Partnership; Joint Stock Companies; Patents; Copyrights; Trade Marks; Comparative references to laws of other Commercial nations; International Law.

7. THEORY, HISTORY, AND ART OF EDUCATION.—I. *Theory, or Philosophy of Education*: End and Idea of Education; Physiology and Psychology of Man, with special reference to Education; the Processes of Intellectual Growth; the Process of Moral and Religious, or Ethical Growth; the Formal and the Real in Education Auxiliaries of the Growth of Mind; General Conclusions as to Education as a Science. II. *Art of Education*: The Educative Process from the Ethical point of view; Analysis of the Educative process from the Ethical point of view. *First Section or Step of the Educative Process*: *Knowledge*: Materials of Education: these fall generally under the two heads of Real-Naturalistic and Real-Humanistic. Method of acquisition in its general principle. Method in relation to Discipline of Intelligence. Method in relation to Instruction and true assimilation by the pupil. Method in relation to periods of Mental unfolding. *Particular Methodology*; or the application of Method to the teaching of the Real-Naturalistic and to the Real-Humanistic respectively. Method of teaching Geography, Composition, Literature, History, Economics, &c. Method of teaching the disciplinary and formal subjects, Arithmetic, Geometry, Language. Method of teaching the instruments of Knowledge—Reading and Writing. Religion under this section. *Second Section or Step of the Educative Process—Instruction in Goodness*: Training to Goodness; Method applied to Moral Training; Religion in this connection. *Third Section or Step of the Educative Process—The Action of the Pupil under a Sense of Duty—The Authority of the Master and Obedience to Authority*:

Conditions of a True and Legitimate Authority; Recognition of Authority by the Pupil; Religion in this connection. Difficulties in the way of Right-Willing; Relation of Right-Willing to Motives; Training to Right-Willing; Consideration of Motives—(*a*) The Attractive, (*b*) The Coercive; Punishments, &c.; Religion in this connection. Music, and the Æsthetic in Education. *Organization of Schools*: Kindergarten Schools; Infant Schools; Primary Schools; Secondary Schools; University Schools. Class-manipulation and subsidiary expedients in teaching. School-books, Apparatus, Buildings, &c. III. *History of Education, or Comparative Education*: (Only select portions of this course can be dealt with in any one session.) (1) Education in China. (2) Education of the Hindu Races. (3) The Education of the Ancient Persians. (4) A brief Sketch of Education among the Semitic Races of the Mesopotamian Basin and among the Egyptians. (5) Education among the Hellenic Races. The educational views of Plato and Aristotle. (6) Education among the Romans. (7) Analysis and exposition of the Institutions of Quintilian. (8) Survey of the History of Education from Constantine to the time of the Reformation. (9) Erasmus and Colet. (10) Luther, Melancthon, and John Sturm. (11) Roger Ascham: Exposition of "The Schole-master." (12) Analysis of Ratichius—(13) of Comenius; Exposition of the Didactica Magna. Realism and utility as opposed to Humanism and Culture. (14) Milton's Educational views. (15) Analysis and exposition of John Locke's "Thoughts on Education." (16) Rousseau, Basedow, and Campe. (17) Dr. Andrew Bell and Joseph Lancaster. (18) Analysis and exposition of Pestalozzi. (19) Jacotot. (20) Fröbel. (21) Jean Paul Richter. (22) Diesterwig. (23) Dr. Arnold. (24) Herbert Spencer and contemporary Realism. (25) Sketch of History of Education in Scotland, and its present condition and prospects. (26) Organization and aims of Education in Germany, and a Sketch of the present state of Education in England, France, and the United States. N.B. Four lectures weekly on Theory and Methodology exclusively till the Christmas holidays. Thereafter, two of the four weekly lectures are devoted to History. Three written examinations are held during the session, and three essays on educational questions called for. *Practice in Teaching*: Those students who have not been in training colleges will have arrangements made for their getting practice in teaching in connexion with one or other of the normal schools. Facilities are also given for visiting the principal schools, and acquiring a knowledge of their organization. *Books necessary*: The Professor's "Handbook to Lectures;" "Comenius' Life and Educational Writings," by the Professor.

8. FINE ART.—The aim of the course will be to afford to those interested in Art as a branch of general culture, as well as to professional students, the means of becoming acquainted with the main outlines of the theory and history of painting, sculpture, and architecture. No technical knowledge will be assumed on the part of those who attend the classes, and the subjects will be treated from the general point of view, while at the same time the interests of practical students will be consulted by special attention being paid to points of artistic treatment. No synopsis of the complete course can as yet be issued, and only portions of the subject can be dealt with in any single session. In Greek and Early Italian Art, the general history of those artistic developments will be traced, and examples in the shape of casts, photographs, and drawings will be employed for illustration. At the same time, attention will be paid to those points in the theory of the arts which are naturally illustrated by the periods chosen, such as the differences between painting and sculpture, the principles of classical architecture, the treatment of the nude form and of drapery by the Greek sculptors, &c. A constant reference will also be made to the history of the times in which Greek and Mediæval Art arose and flourished, and to the connection of the general tone of thought and state of society in those periods with the condition of the arts. A series of eight essays on subjects treated of in the lectures will be set during the session, and at its close the *Cousin prize* (£18) will be awarded to the student who has shown most ability in this branch of the session's work.

9. HISTORY.—*See* FACULTY OF LAW.

Faculty of Divinity.

CURRICULUM FOR THE MINISTRY IN THE CHURCH OF SCOTLAND.—The Laws of the Church of Scotland require that every Theological student who desires to qualify himself for the Ministry should attend the Class of Divinity either during three full and regular sessions, or during two regular and three partial sessions; and also that he should regularly attend during two sessions each of the classes of Hebrew, Ecclesiastical History, and Biblical Criticism.

Entrance Examinations.—(1) Students, before enrolment for the first year of their curriculum with a view to the Ministry in the Church of Scotland, must produce to the Professor of Divinity certificates of their having satisfactorily undergone an examination in the subjects embraced in the Curriculum of Arts, and also in the Elements of Hebrew Grammar. By Act IX. of General Assembly, 1872, it is ordained that this examination shall be conducted, at each of the four Scottish Universities shortly before the commencement of every

session, by four Examining Committees, consisting of members elected by the adjoining Synods, with conveners nominated by the General Assembly. The Convener of the Committee for the University of Edinburgh is the Rev. John Alison, Minister of Newington. The time of the Committee's meeting and the prescribed subjects of examination will be duly advertised in the "Missionary Record of the Church of Scotland." (2) Students, before enrolment at the beginning of every session after the first of their course in Divinity, must produce certificates of their having satisfactorily undergone the examinations prescribed by their respective presbyteries. For subjects of examination prescribed by the Presbytery of Edinburgh, see *post*.

Discourses.—Every student of Divinity is required during his curriculum to deliver with approbation six Discourses upon subjects prescribed by the Professor of Divinity, viz., a Homily, a Latin Exegesis, a Lecture, a popular Sermon, a Hebrew Exercise on a passage of the Old Testament, and a Critical Discourse on a passage of the New Testament. The following regulations have been made by the Faculty of Theology in regard to the delivery of these Discourses: (1) Students of the first year shall give in their Homily to the Professor of Divinity not later than 1st February. (2) Students of the second year shall give in their Latin Exegesis not later than the 24th December, and shall be prepared to deliver their lecture not later than the 3rd January. (3) Students of the third year shall give in their Hebrew Exercise and their Greek Critical Discourse not later than the 24th December, and shall be prepared to deliver their Popular Sermon not later than the 1st of February.

Attendance at Foreign Universities.—The General Assembly of 1868, with the consent of a majority of Presbyteries, enacted and ordained: (1) That all candidates for the Ministry shall attend during at least two sessions the Theological Classes at one or more of the Universities of Scotland, and shall deliver, with approbation, the Six Trial Discourses required by the Acts of the General Assembly; and (2) That any student who wishes to prosecute the remainder of his Theological curriculum at any Protestant University or Universities not within the bounds of this Church, shall, before repairing thither, undergo satisfactory examination by the presbytery with which he is connected, and shall, moreover, satisfy the same presbytery in regard both to the classes which he proposes to attend, and to the proficiency he has acquired in the language used in the foreign university in which he intends to study.

I. DIVINITY.—Lectures will be delivered on Mondays, Tuesdays, and Thursdays at eleven o'clock. On Wednesdays, students will be

examined on "Antitheistic Theories" or Van Oostorzee's "Theology of the New Testament." Fridays will be devoted to the hearing of Discourses and Exercises.

II. HEBREW.—*Junior Class*: Grammar and Exercises (Davidson's "Hebrew Grammar"); Translations into Hebrew Prose; Readings and Explanations of Genesis and Psalms. Oral and occasional Written examinations.

Senior Class.—Grammar (Davidson's or Gesenius); Hebrew Prose Composition; Readings and Explanations of 1 Samuel, Psalms, and Isaiah; Occasional Lectures in the Hebrew Language and Literature; Oral and Written examinations.

III. DIVINITY AND CHURCH HISTORY.—1. *Lectures*—On the Rise and Diffusion of Protestantism: The Church in Scotland from 1572 to 1690. 2. *Text book*: Kurtz's "History of the Christian Church." First section, First, Second, and Third Period. 3. Greek Text: Third Oration of St. Athanasius against the Arians (Bright's edition). The work of the class includes three written examinations.

Faculty of Law.

ORDER OF STUDY.—*Extract from Minutes of a Meeting of the Faculty, 20th February*, 1863: The Faculty having taken into consideration that the course of study in Law extends over three academical years, and that the natural order in which the various branches of the course ought to be taken up is often departed from and sometimes altogether inverted—recommend students, whether intending to graduate in Law or not, to attend the lectures in the following order, viz.: First year—Civil Law; Second year—Scotch Law; Third year—Conveyancing; and to attend the lectures on Public Law, Constitutional Law and Legal History, and Medical Jurisprudence, during the second and third years of study, in such order as may be most convenient to each individual student.

I. CIVIL LAW.—The course of lectures on Civil Law extends over a winter and summer term, covered by one entrance fee of £5 5s. The winter lectures begin in November, and continue until the end of March; the summer lectures are given in May, June, and July. The subject-matter of the course is the External and Internal History and General and Special Doctrines of the Law of Rome, as developed in the Institutes of Gaius and Justinian, supplemented by the other ante-Justinianian and Justinianian texts. The lectures will be equally adapted for students intending to enter the legal profession in Scotland or England, or qualifying for service in India or the Colonies. *Text books*: The Professor's edition of the Institutes of Gaius, and Rules of Ulpian, and the Institutes of Justinian. For preliminary reading,

intending students may consult Ortolan's "History of Roman Law," by Pritchard and Nasmith.

II. LAW OF SCOTLAND.—*Winter Session*: The lectures have special reference to the writings of Mr. Erskine, and students are strongly recommended to make themselves familiar either with his "Principles," editions by W. Guthrie, Esq., or his "Institutes," edition by J. Badenoch Nicolson, Esq., 1871. 1. Sketch of the Literature of the Law of Scotland—the sources of the Law—the interpretation of Statutes—jurisdiction—judicial machinery. 2. Personal Relations—Marriage and the modes of proving it—patrimonial effects of Marriage—rights of husband and wife—dissolution of Marriage—divorce—tutors and curators—minors—insane—idiots—parent and child—master and servant. 3. On the Origin of Property—its acquisition—possession—heritable and moveable—constitution of heritable rights—the Charter and its clauses—investiture—mutual rights of superior and vassal—law of landlord and tenant—transmission of feus—redeemable rights—servitudes—entails, prescriptions—questions of double title. 4. Obligations and Contracts—general requisites, constitution, and construction—partnership—joint-stock companies—factory and agency—sale—stoppage *in transitu*—commodate—pledge—carriers—shipping—insurance—bills of exchange—cautionary—extinction of obligations—diligence—bankruptcy. 5. Succession—heritable and moveable. 6. Parochial Law—clergy, teinds, manses, and glebes—churches—schoolmasters—poor. 7. Law of Evidence. 8. Criminal Law. *Summer Session*: The lectures on Criminal Law are delivered during the summer session.

III. CONVEYANCING.—The course of lectures delivered from the Chair of Conveyancing will embrace the following subjects:

Branch First.—Deeds in General: I. Capacity of the parties to contract, and lawfulness of the subject-matter. 2. Requisites as to external form, description of the parties, integrity of the text, and the solemnities of execution and authentication. 3. Deeds privileged as regards these solemnities. 4. Necessity of delivery and acceptance. 5. Freedom of consent essential to give validity to Deeds, and operation of error, fraud, force, and fear as grounds of reduction. 6. Effect of *homologation* and *rei interventus* in validating Deeds imperfect or defective in themselves. 7. The Stamp Laws in their relation to Conveyancing. 8. General Structure of and Clauses common to all Deeds.

Branch Second.—Deeds relating to Moveable Rights: 1. The personal bond and other personal obligations, transmissions thereof *inter vivos*, and discharges. 2. Personal contracts (exclusive of the contract of

marriage). 3. Deeds relating to corporeal moveables, including maritime writs. 4. Factories and powers of attorney.

Branch Third.—Deeds relating to Heritable Rights: 1. Sketch of the feudal system and its bearing on the existing state of heritable rights in Scotland. 2. The writs constituting a feudal estate, and the respective rights of superior and vassal. 3. The writs used in the voluntary transmission, *inter vivos*, of such estate, and of lands formerly held by burgage tenure. Under this head will also be considered the missive of sale and articles of roup, together with what constitutes a *prescriptive* progress of titles, and a full search of incumbrances. 4. The judicial transmission of heritage. 5. Heritable securities, their constitution, transmission, and extinction. 6. Leases.

Branch Fourth.—Family Settlements and relative Deeds: 1. Destinations. 2. The completion of titles by the heir or successor to heritable estate. 3. The contract of marriage and bond of provision, as affecting moveable or heritable estate or both. 4. Testamentary Deeds, applicable to either or both classes of estate. 5. The completion of titles by the executor to moveable estate. 6. The entail and disentail and relative Deeds.

In each of these *Branches*, the alterations made by recent Acts of Parliament in the structure or effect of any of the deeds or writs treated of will be pointed out, and the old and new forms compared.

IV. Public Law.—The course of lectures delivered from the Chair of Public Law and the Law of Nature and Nations is divided into two branches:

1. *Natural Law*, the Philosophy of Law, or the principles of the science of Jurisprudence as a whole. The object of this branch of the course is to exhibit Jurisprudence in the light of a science resting, in all its departments, on nature, as opposed to a system of rules deduced from premises that are arbitrary or empirical. The Law of Nature is consequently investigated, not as a primitive system of positive law existing in a particular condition of society real or imaginary, but as the necessary groundwork of society itself, and the unchangeable element in all systems and branches of Positive Law. The relation between Natural Law thus understood, and the *jus naturale* and *jus gentium* of the Romans, having been examined, and the more celebrated definitions and divisions of the science, ancient and modern, briefly enunciated, the general scheme of the whole course is explained, and the first branch subdivided thus: (*a*) Sources of natural law, or of general jurisprudence = ultimate sources of positive law, or of special jurisprudence. (*b*) Objects of natural law, or of general jurisprudence = ultimate objects of positive law, or of special jurisprudence.

(*c*) Proximate sources of positive law, or of special jurisprudence viewed as a whole. (*d*) Proximate objects of positive law, or objects of the different branches of positive law.

2. *International Law*, or the *Jus inter Gentes*: 1st, Sketch of the History of International Law. (*a*) The Oriental or Ante-Classical Period. (*b*) The Classical Period. (*c*) The Maritime Communities of the Mediterranean in the Middle Ages. (*d*) The general Maritime Codes. (*e*) The maritime jurisdiction of England. (*f*) The North of Europe and the Hanseatic League. (*g*) The rise of scientific Jurisprudence: the Scholastic Period; the Spanish Period; the Dutch and German Period, down to the Peace of Westphalia. 2nd, *Public International Law*: *A.* Independent States in their peaceful relations. (*a*) Recognition; or what is a State internationally considered? (*b*) The different kinds of States. (*c*) The property of the State. (*d*) Intervention. (*e*) The Balance of Power. (*f*) Legation. (*g*) The Diplomatic Profession. (*h*) The Consulate. (*i*) Negotiation. (*j*) Treaties. (*k*) Professional literature of diplomacy. *B.* Independent States in their warlike relations. (*a*) Tentative war by means of embargo, reprisals, &c. (*b*) The laws of war on land. (*c*) Laws of war at sea. (*d*) Blockade. (*e*) Neutrality. This branch of the course is varied from year to year, some portions of it being treated with greater, and others with less fulness. 3rd, *Private International Law*, or the rules in accordance with which the municipal laws of one State are recognised within the territories of another: This subject is treated in connection with the general doctrine of recognition. The abstract principles evolved in the first branch of the course are continually kept in view, and exhibited in the concrete in the subsequent branches. In discussing the doctrines of Public International Law, the aim of the professor is twofold; 1st, To illustrate to law students in general the dependence of a special branch of Jurisprudence on the facts of nature, and on the relations necessary to the existence and development of organic social life; and 2nd, To communicate information on the subject of positive International Law, both public and private. *Text books*: *Natural Law*—Lorimer's "Institutes of Law," second edition; Ahrens's "Cours de Droit Naturel," Trendelenburg's "Naturrecht auf dem Grunde der Ethik," Krause's "Rechts Philosophie" (edited by Röder) and Röder's "Naturrecht." *History*: Wheaton's "History of the Law of Nations," Pardessus' "Us et Coutumes de la Mer," Reddie's "Historical View of the Law of Maritime Commerce," Lindsay's "History of Merchant Shipping." *Public International Law*: Bluntschli's "Moderne Völkerrecht" (of which there is a French translation entitled "Droit International Codifié"), Heffter's "Droit International Public,"

Lawrence's "Commentaire sur les Élémens du Droit International," Wheaton's "Elements of International Law," by Lawrence or Dana, Phillimore's "International Law," Hall's "International Law." *Private International Law*: Savigny's "Private International Law," by Guthrie, Bar's "Internationale Privat-und Strafrecht," Westlake's "Private International Law," second edition.

V. HISTORY.

VI. MEDICAL JURISPRUDENCE.—*Part I. Medical Jurisprudence.—Medical Evidence Generally*: 1. Documentary—Reports and written opinions. 2. Oral—Common witnesses. Experts. 3. Experimental—Examination of the living; identity; state of body; state of mind. Examination of the dead; real or apparent death; identity; cause of death; exhumations, autopsies. Examination of localities. Examinations of productions. *Medical Evidence Specially*: *Questions affecting Health or Life*: 1. Assaults and Homicides — Wounds and other external injuries; blood stains. Suffocation, hanging, and strangling; drowning. Starvation. Heat and cold. Poisons. 2. Suicide. 3. Offences against Chastity—Rape, &c.; concealment of pregnancy; criminal abortion; infanticide. 4. Malpraxis and Neglect of Duty. *Questions affecting Property*: Nuisances; Arson; Forgery; Coining. *Questions affecting Civil Rights or Social States*: Marriage and Divorce. Impotence and sterility. Live birth; Inheritance. Legitimacy. Survivorship. Insanity. Congenital defects. Exemption from public duties. Feigned diseases.

Part II.—Medical Police.—Hygiene of Individuals: Man—Age and development; Sex; Constitution. External Agencies — Food and Drink; Air; Clothing; Ablutions; Exercise. Habits and Modes of Life: Temperance; Celibacy and Marriage; Professions— learned, mechanical; Criminal Punishments; Prostitution. Duration and Expectancy of Life: Life Assurance. *Hygiene of Communities*: *Duties of Medical Officers of Health*: Climate: Causing disease; remedying disease. Towns, Camps, and Private Habitations: Topographical position; water supply; heating and lighting; ventilation; drainage and sewerage. Public Buildings: Schools; churches; hospitals; theatres; prisons. Cemeteries, Quarantine Establishments, Epidemics, Endemics. *Text books*: Taylor's "Medical Jurisprudence," Guy's "Principles of Forensic Medicine," Wharton and Stillé's "Treatise on Medical Jurisprudence," Parke's "Practical Hygiene," Wilson's "Handbook of Hygiene," Michael, Corfield, and Wanklyn—"Manual of Public Health," edited by E. Hart, Galton's "Healthy Dwellings."

VII. POLITICAL ECONOMY AND MERCANTILE LAW.—See under *Political Economy* in FACULTY OF ARTS.

Regulations for Graduation in Arts.

The degree of Master of Arts is a passport to the General Council of the University, to professional study for the learned professions, to the Army, &c. It is also, under recent regulations, a passport to masterships of public schools, under the Education Act (1872), subject to an examination in the methods of instruction, and three months' attendance in a public school for the practice of teaching:

I. The ordinary course of study necessary for the degree of *Master of Arts* (except in the circumstances mentioned in the following article) extends over *four winter sessions*, and includes attendance for not less than two sessions on the classes of Humanity (Latin), Greek, and Mathematics respectively; and attendance for not less than one session on the classes of Logic and Metaphysics, Moral Philosophy, and Natural Philosophy respectively; and also attendance on the class of Rhetoric and English Literature.

II. Any student who, at the time of his entrance to the University shall satisfy the professors of the Faculty of Arts, on examination, that he is qualified to attend the higher classes of Latin, Greek, or Mathematics, or any one of them, may be admitted to such higher class or classes without having previously attended the junior class or classes in the same department. When a student has been thus admitted by the Faculty of Arts to the higher classes both of Latin and Greek, without having previously attended the first or junior Latin and Greek classes, his course of study for the degree of Master of Arts may be completed within *three winter sessions*, instead of four. And no student who is thus admitted to the higher class of Latin, Greek, or Mathematics without having previously attended the first or junior class in the same department is required to give attendance in Latin, Greek, or Mathematics respectively, for more than one session, as a necessary part of the course of study for the degree of Master of Arts.

III. In pursuing the course of study for the degree of Master of Arts, no student is permitted to pass from the junior to the higher class, unless the professor is satisfied of his fitness to enter the higher class.

IV. It is in the power of any student, who has given attendance during one or more sessions in any Scottish University, to complete his course of study, by giving attendance in the University of Edinburgh during the remaining sessions of his course, provided always that every such student gives attendance in the University of Edinburgh during, at least, the *last two sessions* of his course; and provided also that he produces, to the satisfaction of the Faculty of Arts of the University of Edinburgh, class certificates of his attendance at the former Scottish University; but he shall be examined in all the three departments necessary for the degree of Master of Arts by the examiners of the University of Edinburgh.

V. Candidates for the degree of Master of Arts must be examined on all the subjects of instruction embraced in the above course of stu-

demical study; and the examinations may be conducted wholly in writing or partly *viva voce*.

VI. Any student who has completed his attendance on the classes of *Latin and Greek*, required in the prescribed course of study, may be examined on these subjects, at any examination for degrees, although he may not have completed his attendance on the other classes of the prescribed course.

In like manner any student who has completed his attendance on the classes of *Logic and Metaphysics, Moral Philosophy, and Rhetoric and English Literature* may be examined on these subjects at any examination for degrees, although he may not have completed his attendance on the other classes of the prescribed course.

Also, in like manner, any student who has completed the attendance required in the prescribed course of study on the classes of *Mathematics and Natural Philosophy* may be examined on these subjects at any examination for degrees, although he may not have completed his attendance on the other classes of the prescribed course.

And if such student shall satisfy the examiners, when so examined, in the department of *Classical Literature*, which comprehends Latin and Greek—or in the department of *Philosophy*, which comprehends Logic and Metaphysics, Moral Philosophy, and Rhetoric and English Literature—or in the department of *Mathematics* and *Physics*, which comprehends pure Mathematics and Natural Philosophy, he shall receive from them a *certificate* to that effect, and he shall not be examined again in the same department, as a condition of his taking the degree of Master of Arts.

VII. Students who have fulfilled the preceding conditions, and have passed the ordinary examinations on the several subjects embraced in the prescribed course of study, are, after signing the *Sponsio Academica*, and on presenting themselves at the Public Ceremonial of Graduation in April, entitled to receive the degree of Master of Arts, and their names are published in the "University Calendar," in alphabetical order, in the Graduation List.

VIII. At the Public Ceremonial of Graduation in Arts, held annually in April, the degree of *Master* is conferred by the Chancellor or the Vice-Chancellor of the University, in name of the Senatus Academicus. Degrees are not conferred on any who are not present at the Graduation Ceremonial, and who have not signed the *Sponsio*, although they may have passed all their examinations. Those who are presented to receive the degree must appear in academical costume, and with the hood proper to the degree.*

IX. *Fees* for examination must be paid by candidates in advance, when they intimate their names and addresses to the Clerk of the University. The examination fee for the degree in Master of Arts is three guineas. The fee for examination of each of the three departments mentioned in Article VI. is one guinea, and no further fee than the sum of three guineas is payable

* Black silk lined with white.

by any candidate for admission to the degree in Arts, whether with or without Honours.

GRADUATION IN ARTS WITH HONOURS.

I. Students who have passed the examinations in the three departments embraced in the course of study prescribed for the degree of Master of Arts, may, before taking the degree, offer themselves for a further examination, with a view to graduation with Honours; and that either in the same year in which they have completed the Pass or ordinary examinations, or in a future year. Also, any student who desires to offer himself for examination with a view to graduation with Honours, in any one or more departments, may proceed to such Honours' examination, after sufficient attendance on the classes in the department or departments in which he desires to offer himself, without having previously passed the examination in such department or departments for the degree of Master of Arts without Honours; and if such student, in the opinion of the examiners, fails to attain the standard for Honours in any department, but attains to the standard of the examination for graduation without Honours, he shall be held to have passed in that department for the degree of Master of Arts, without Honours; but if, in any such department, he fails to attain to the standard of the examination for graduation without Honours, he shall not be entitled, until he shall have passed in that department, to the degree of Master of Arts. And no person, without the permission of the Senatus Academicus, can be admitted to an examination for *Honours*, after he has ceased, for more than one winter session, to be a matriculated student, in attendance on a class or classes in the University.

II. There are four departments for graduation in Arts with Honours, in any one or more of which, subject to the preceding regulation, students may present themselves for further examination, viz.:

A. Classical Literature—Latin, Greek.

B. Philosophy—Logic, Metaphysics, Moral Philosophy.

C. Mathematics and Physics—Pure Mathematics, and Natural Philosophy.

D. Natural Science—Geology, Zoology, Chemistry, Botany.

III. In each of the first three of the above-mentioned departments, viz., in Classical Literature, in Philosophy, and in Mathematics, there are *two* grades of Honour, each representing, as nearly as possible, a uniform standard of qualification, and denominated respectively the *First Class* and the *Second Class*. The names of candidates entitled to Honours, in each of these classes, are arranged in alphabetical order.

IV. In the department of Natural Science, there is only *one* class for Honours, and the names of candidates entitled to Honours in that class are arranged in alphabetical order.

* After obtaining their degree, candidates should apply for their diplomas at the office of the Secretary of the University. There is no additional charge for the diploma. Those graduates who have completed their twenty-first year may have themselves enrolled, also at the Secretary's office, as members of the University Council.

V. The names of candidates to whom the examiners award a First or Second Class in the examination for Honours will be duly published and retained in the "University Calendar," in the Class Lists, under the year in which the Honours were taken by them, and in the department or departments in which they were so classed.

Regulations for Certificate of "Literate in Arts" (L.A.)

The following regulations have been adopted by the University Court under the powers conferred:

1. There shall be instituted in the Faculty of Arts a University certificate conferring on those who obtain it the title of "Literate in Arts."

2. The said certificate shall be open to persons who have been students in the Faculty of Arts for not less than two sessions; and who have during that time given attendance on not less than five classes in the said Faculty, so as to include four at least of the seven subjects necessary for graduation in Arts.

3. The examinations for the said certificate, in the four (or five) subjects which are also necessary for the degree of Master of Arts, shall be the ordinary graduation examinations in Arts in such subjects; and the examination in any subject not in the course of study necessary for the degree of Master of Arts shall be of a standard equivalent to that of the ordinary graduation examinations in Arts.

4. The fee for the certificate of Literate in Arts shall be £2 2s.

Supplementary.

1. The title of Literate in Arts is not open to persons whose qualifications for the certificate are entirely of a date anterior to April, 1880.

2. The examinations for the certificate may be taken either at one or at two periods, at the option of the candidate. When divided, the First examination must embrace at least two out of the five necessary subjects; the Second examination must embrace the remaining subjects.

3. When the five necessary subjects are all taken at one examination, in April or in October, the fee is £2 2s.; and when the examination is divided the fee is £1 1s. on each of the two occasions.

Regulations for Graduation in Divinity.

Regulations for the degree of Bachelor of Divinity; approved of by the Chancellor of the University, 17th October, 1870, and 17th April, 1872:

I. No one shall be admitted as a candidate for the degree of Bachelor of Divinity unless he be a graduate in Arts of one of the Universities of Scotland, or of England, or of Ireland, or of a Colonial University, whose degrees shall, for this purpose, have been specially recognised by the University Court.

II. This degree shall be conferred only after the candidate has completed his Theological curriculum with a view to the Ministry in the Church or

Denomination to which he belongs, and after he has passed a satisfactory examination in the various branches of Theology which are taught in this University.

III. Candidates who are not Masters of Arts of the University of Edinburgh must have attended two classes in one or more of the Faculties of this University.

IV. The subjects of examination for the degree of Bachelor of Divinity shall be arranged in two departments: The First Department embracing—(1) Hebrew, and (2) Apologetic Theology, or the Evidences of Natural and Revealed Religion; and the Second Department embracing—(1) Church History, (2) Systematic Theology, Criticism and Biblical Antiquities.

V. Candidates who have completed their Theological course may be examined in either of these departments, and may defer to some future occasion their examination in the other department, provided always that there be not a greater interval than two years between their two examinations.

VI. Students who have completed all the sessions but one of their Theological course may be admitted to examination in the first department.

VII. The examinations shall be conducted by the professors of the Theological Faculty with the assistance of two examiners, being Bachelors of Divinity of one of the Universities of Scotland, to be nominated by the University Court.

VIII. The examination in the First Department shall take place at, or soon after, the commencement of the Theological session; and the examination in the Second Department at, or soon after, the close of the Theological session—power being reserved to the Senatus Academicus, should they see cause, to appoint the examination in both departments to take place at either of these periods.

IX. The *fee* for examination shall be £3 3s., payable in advance; but when the examination is undergone on different occasions, a fee of £2 2s. shall be paid prior to the first, and the remaining £1 1s. prior to the last examination.*

Graduation in Law.

Degrees of Bachelor of Laws (LL.B.) and Bachelor of Law (B.L.).—Two degrees in Law are conferred by examination in the University of Edinburgh, viz., Bachelor of Law (B.L.) and Bachelor of Laws (LL.B.). The degree of B.L. admits to the profession of Law Agent, provided an examination in the Practice of the Court is passed to the satisfaction of the examiners under the Law Agents Act. The degree of LL.B. admits to the profession of Advocate without further exmination. Both degrees qualify for admission to the General Council of the University. Candidates for the degree of LL.B. must have previously graduated as M.A. in a Scottish university, or some other university approved of by the Senatus and University Court. Candidates for the degree of B.L. do not require to have graduated as

* All candidates must matriculate before examination.

M.A.; but when they have not graduated as M.A., a Preliminary examination in general knowledge must be passed according to the Regulations after stated. By a Resolution of the Faculty of Law, candidates with the necessary preliminary qualification for either degree may present themselves for the Law examinaion in any number, not less than two, of the subjects in which an examination in Law has to be passed, and they may present themselves for examination in the subjects in which they have not already passed at a subsequent examination. Until further notice there will be only one examination in Law for degrees in each year, and it will be held on the last Monday in June. The degree of Bachelor of Laws was instituted by an Ordinance of the Universities Commissioners, dated 12th July, 1862. The degree of Bachelor of Law (B.L.) was instituted by the University, and approved by her Majesty by order in Council, dated 6th August, 1874. The rules of the Ordinance are:

I. No one shall hereafter be admitted as a candidate for the degree of Bachelor of Laws (LL.B.) . . . unless he be a graduate in Arts of one of the universities of Scotland, or of England or Ireland, or a graduate in Arts of a colonial or foreign university whose degree may, for this purpose, have been specially recognised by the University Court.

II. The course of study in Law necessary for the degree of Bachelor of Laws shall extend over three academical years, and shall include attendance on a distinct course in each of the six following departments, viz:

(1) Civil Law, (2) Law of Scotland, (3) Conveyancing—during courses of not less than eighty lectures each; (4) Public Law, (5) Constitutional Law and History, (6) Medical Jurisprudence—during courses of not less than forty lectures each.

III. No one shall hereafter be admitted to examination as a candidate for the degree of Bachelor of Laws until he has completed the course of study above prescribed; and no one shall be admitted as a candidate in any university unless two at least of the three academical years of his course of study in Law shall have been in such university.

IV. Candidates for the degree of Bachelor of Laws shall be examined, both in writing and *vivâ voce*, on each of the six departments of Law above specified.

V. Each candidate must satisfy the examiners that he possesses a competent knowledge of Law in each of the said departments; and the examiners shall further, in judging of the qualifications of candidates, have special regard to their acquirements in the two departments of Public Law and Constitutional Law and History.

VI. Except, as hereinafter provided, with regard to the University of Edinburgh, the examiners for degrees in Law in each of the said universities shall be six in number, and there shall always be one examiner specially qualified for each one of the six deparements above specified; and where the

professors in the Faculty of Law in any university do not furnish the requisite number of examiners duly qualified, the number shall be made up by the appointment of additional examiners by the University Court; provided always, that no person shall be appointed an additional examiner in any university unless he be a professor in the Faculty of Law in a Scottish University, or shall have attained the degree of Bachelor of Laws, in accordance with the provisions of this ordinance. . . .

IX. Each candidate for the degree of Bachelor of Laws shall pay a fee of £5 5s. in respect of his examination for the degree:* For First examination, £3 3s.; for second, £2 2s.† . . .

XI. Besides the degrees in Law above specified, there shall be in the University of Edinburgh a second degree in Law granted after examination—namely, the degree of Bachelor of Law (B.L.).

XII. No one shall be admitted to examination as a candidate for the degree of Bachelor of Law in the University of Edinburgh, unless he be a graduate in Arts, qualified as prescribed in Section I., or unless he shall have studied in one of the universities therein mentioned, during at least one academical year, one or more of the subjects included in the course of study in the Faculty of Arts, and shall have passed a satisfactory examination in (1) Latin, (2) Greek, French, or German, and (3) any two of the following subjects—namely, Logic, Moral Philosophy, and Mathematics. The examinations shall be conducted by examiners in Arts, together with some of the Law examiners.‡

XIII. The course of study in Law necessary for the degree of Bachelor of Law in the University of Edinburgh shall extend over at least two academical years, and shall include attendance on a distinct course, as specified in Section II., in each of the first three of the departments therein mentioned, and in any one of the other three departments, and no one shall be admitted to examination as a candidate for the said degree unless two academical years of his course of study in Law shall have been in the University of Edinburgh.

XIV. The examination for the said degree of Bachelor of Law in the University of Edinburgh shall be conducted at the same time, and in the same manner, as that for the degree of Bachelor of Laws, and the candidates shall be examined in each of the departments of Law on which they shall have given attendance, as above required.

XV. The examiners for degrees in Law in the University of Edinburgh shall be the professors in the Faculty of Law, together with two additional examiners appointed by the University Court from among those who have obtained the degree of Bachelor of Laws, in accordance with the provisions of this ordinance. Each of such additional examiners shall hold office for the term of three years.

* Every candidate for a degree in Law must matriculate at the University for the year in which he appears for examination or graduation.

† No fee is payable in respect of any examination after the second.

‡ Candidates must pass all the subjects, other than French or German, at the ordinary examinations for the degree of M.A. in April and October; or, if they present themselves for examination in French or German, at the Preliminary examination for the Medical Faculty in March or October; for which see "Regulations for Degrees in Medicine."

XVI. The *fee* to be paid by each candidate for the degree of Bachelor of Law in the University of Edinburgh shall be the same as is provided by Section IX. with reference to examinations for the degree of Bachelor of Laws. For Preliminary examination in Arts, £1 1s.; for First examination in Law, £2 2s.; for second, £2 2s.*

Gentlemen proposing to enter for either of these degrees are requested to apply for information to, and to lodge their names on or before the 23rd June, with the Clerk to the University. Candidates for the degree of LL.B. must produce evidence of their being graduates in Arts. The examinations commence in June. The *subjects for examination* will be, until further notice, as follows: In the *Civil Law* the examination will be on the History of the Law of Rome; on its Principles as explained in the Institutes of Gaius and Justinian; and on the 6th and 45th Books of the Digest. In the *Law of Scotland* the subject of examination will be the Municipal Civil Law, and the works of Mr. Erskine and Mr. G. J. Bell are recommended to candidates. In *Conveyancing* the subject of examination will be the Constitution of Heritable Rights and their Transmission *inter vivos* and *mortis causa*. In *Public Law* the subjects will be the following: 1st, *Natural Law* in relation to Ethics on the one hand, and to Positive Law on the other. *Text books*: Lorimer's "Institutes of Law," and Ahrens' "Cours de Droit Naturel." 2nd, *Public International Law*, doctrinally and historically treated: *Text books*: Wheaton's "History," Kent's "International Law" by Abdy, Bluntschli's "Moderne Völkerrecht," of which there is a French translation entitled "Droit International Codifié." 3rd, *Private International Law*, as explained in the eighth vol. of Savigny's "System des heutigen römischen Rechts" (of which there is both an English and a French translation). In *Constitutional Law and History* the subjects of examination will be as follows: 1. The Constitutional History of England from the accession of Henry VII. to the accession of Victoria. 2. The Constitution, Powers, and Privileges of Parliament, including the Law relating to Election of Members of Parliament. In *Medical Jurisprudence* the subjects will be: 1. Death by Asphyxia. 2. Poisoning by Phosphorus, by Prussic Acid, and by Aconite. 3. Infanticide. 4. Criminal Responsibility. *Note*: Candidates for the degree of Bachelor of Law are required to pass the preliminary subjects at the ordinary examinations for the degree of M.A. in April and October, except French and German, in which a special day will be fixed for examination. See subjects prescribed under *Pass examination for Degree of M.A.*

Degree of Doctor of Laws (*LL.D.*).—The degree of Doctor of Laws is conferred *honoris causâ tantum*. It was first granted in 1695.

* No fee is payable in respect of any examination after the Second examination in Law.

Previously to 1751 it had been conferred on only seven persons. Since then about 130 names, including some of the most distinguished in Europe, have been added to the Register of Doctor of Laws in the University.

Graduation in Science.

Two degrees in Science are conferred by the University of Edinburgh, viz., *Bachelor of Science* (B.Sc.) and *Doctor of Science* (D.Sc.). Both these degrees are conferred in Physical and Natural Science, in Public Health, and in Engineering. In Mental Science and in Philology (Sections D and E) the degree of Doctor of Science only is conferred. Candidates should apply to the Dean of the Faculty of Arts.

A. Degree of Doctor in Physical and Natural Science.—I. *Qualifications Required in Candidates.*—1. Candidates for degrees in Physical and Natural Science must, unless exempted, pass a Preliminary examination in English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and in at least two of the following subjects: Greeek, French, German, Higher Mathematics, Natural Philosophy, Logic, and Moral Philosophy.

Exemptions from Examination.—(*a*) Bachelors or Masters of Arts, by examination, of British or recognised Indian or Colonial Universities. (*b*) Bachelors or Doctors of Medicine of British or recognised Indian or Colonial Universities. (*c*) Holders of two departmental certificates in the Faculty of Arts of this University. (*d*) Candidates who have passed in this University the Entrance examination for curriculum of three sessions for degrees in Arts in Latin, Greek, and Mathematics, are exempted from the Preliminary examination in Latin, Arithmetic, and Elements of Mathematics, and are held to have passed in Greek and Higher Mathematics as optional subjects. (*e*) Matriculated students of the University of London. (*f*) Students who have been admitted by examination to the Royal Indian Engineering College, Cooper's Hill, and who have obtained 50 per cent. of the marks in Latin or in Greek in the competitive examination for entrance to that College. Should such students not bring evidence of having obtained 50 per cent. in either of these subjects, they will be required to pass the Preliminary examination in Latin. (*g*) Holders of certificates of having passed the Leaving examinations of the Universities of Oxford and Cambridge when certified as equivalent to a pass in Responsions at Oxford and the First examination at Cambridge. (*h*) The examinations of the Bodies recognised as exempting from the Preliminary examination in Medicine also exempt from the Registration examination for Degrees in Science. Candidates for this Preliminary examination are examined at the same time as those for entrance into the study of Medicine. For further

details as to the Preliminary examinations see notices under "Medical Graduation." 2. They must also produce evidence of attendance on qualifying classes embracing the subjects included in the Science examination which they purpose to undergo. 3. The attendance on such classes must extend over three academical years, one of which must be passed at the University of Edinburgh, the other two years either at this University, or at universities or institutions* recognised by and approved by this University. Classes of Chemistry, of Practical Chemistry, of Botany, and of Zoology, which are recognised for the First Professional examination for Degrees in Medicine are also recognised for the First Bachelor of Science examination. 4. Each academic year must be constituted by attendance on Science classes during at least two full winter courses, or one full winter course and two full summer courses. Continuous work in a scientific laboratory extending over a period of not less than five months will be reckoned equivalent to a full winter course of lectures, and continuous work in a scientific laboratory extending over a period of three months will be reckoned equivalent to a full summer course of lectures. 5. Every candidate for a degree in Science must be matriculated for the year in which he appears for examination or graduation.

II. *Examinations.*—For the degree of Bachelor of Science, there are two examinations, conducted by written questions, as well as orally and practically.

(*a*) *First Bachelor of Science Examination.*—1. The First examination for B.Sc. is as to the general knowledge of the candidate on the following subjects, viz.: Mathematics, Natural Philosophy, Chemistry, Zoology, including Comparative Anatomy, Botany. 2. The examinations in Mathematics and Natural Philosophy take place on the days of examination for these subjects announced in the Regulations for Graduation in Arts. 3. The examinations in Chemistry, Zoology, and Botany, take place at the same time as the examinations on these subjects, announced in the Regulations for Graduation in Medicine. 4. Candidates may appear for this examination at any period of examination subsequent to their attendance on the necessary classes. 5. Masters of Arts who have taken Honours in the Natural Sciences after passing the examinations for M.A. in this University are exempted from the First Bachelor of Science examination. 6. Masters of Arts and holders of departmental certificates in the Department of Mathematics in this University are exempted from examination in Mathematics and Natural Philosophy. 7. Candidates who have passed the First Professional

*The institutions to be approved of by the University must be of a high class, such as the Royal School of Mines, London, the Ecole Centrale, or the Ecole des Mines, Paris.

examination for degrees in Medicine in this University are exempted from examination in Chemistry, Zoology, and Botany.

(*b*) *Second Bachelor of Science Examination.*—1. The Second B.Sc. examination is divided into the following groups, one of which must be professed by the candidate: (*a*) The Mathematical Sciences—Higher Mathematics, Natural Philosophy; (*b*) The Physical Experimental Sciences—Experimental Physics, Chemistry; (*c*) The Natural Sciences—Zoology, Botany, Physiology, Geology. 2. The examinations in the first two of these departments (except in Chemistry) will take place at the same time as the examination for the degree of M.A., and in the last (and in Chemistry), at the same time as the examination for the First M.B. Professional examination. 3. A candidate who has passed the First B.Sc. examination may proceed to the Second, after an interval of six months. 4. A candidate who has passed the First and Second B.Sc. examinations will be recommended to the Senatus for that degree, which will be conferred at one of the usual times appointed.

(*c*) *Doctor of Science Examination.*—1. A candidate who has received the degree of B.Sc. may proceed to that of Doctor of Science, after a lapse of twelve months. 2. A candidate for the degree of D.Sc. must profess one of the above mentioned sciences, of which he will be expected to have a thorough knowledge. 3. He must submit a thesis containing some original researches on the subject of his intended examination, and such thesis must be approved before the candidate is allowed to proceed to examination. 4. The degree of D.Sc. will not be conferred on any candidate who has not completed his twenty-first year.

DOCTOR OF SCIENCE.—The *fees* for the degrees in Science in the Department of Public Health shall be: For the First B.Sc. in Public Health examination, £5 5s.; for the Second B.Sc. in Public Health examination, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s.—£15 15s. The same regulation as to the non-return of fees applies to this department as to the others. The degrees in Science are conferred at the Graduation Ceremonial in April.

BOOKS.—The following are recommended as *books to be studied* in preparation for the above examinations: E. Parkes, "Practical Hygiene;" George Wilson, "Handbook of Hygiene;" Edw. Smith, "Manual for Public Officers of Health," "Handbook for Inspectors of Nuisances;" Michael, Corfield, and Wanklyn, "Manual of Public Health," edited by E. Hart; Eassie, "Healthy Houses;" Baldwin Latham, "Sanitary Engineering;" Jenkin Fleeming, "Healthy Houses;" Henry Law, "Rudiments of Civil Engineering;" Geo. Monro, "The Public Health (Scotland) Act;" Alex. Buchan, "Introductory Text Book of Meteorology."

D.—DEGREE OF DOCTOR IN MENTAL SCIENCE.—The degree of Doctor of Science is open to candidates highly prepared in the Mental Sciences. 1. The candidate must be a graduate, by examination, of a British or recognised Indian or Colonial University. 2. He must be matriculated for the year in which he appears for examination or graduation. 3. He must have attended for at least one academic year in this University, and during that year he must have taken at least two classes on the subjects embraced in the examination. 4. The candidate must, in evidence of literary and philosophical culture, send to the Dean of the Faculty of Arts *at least one month* before proceeding to examination, a thesis giving evidence of original research, on a subject in Mental Science previously approved by the Science Degrees Committee (Sections D and E). Mere compilations will not be accepted. The candidate can be admitted to examination only after this thesis has been found satisfactory. 5. The examination includes Logic and Metaphysics, Moral Philosophy, and the History of Philosophy, both Metaphysical and Moral; in particular on any of the subjects embraced in the following programme:

Logic and Metaphysics.—(*a*) *Logic*: The Province of Logic; Formal Logic—the Theory and details of Propositional and Syllogistic Forms, with their recent Developments, especially by Hamilton, De Morgan, and Boole; Fallacies; Verbal Logic—Definition—the Predicables—Nominalism and Realism; Material Logic—the different sorts of Evidence; Authority and Science; the methods of Scientific Induction; the philosophical questions involved in the Theory of Induction. (*b*) *Metaphysics*: Personality—Classification of the facts of Consciousness, with relative Psychological and Physiological Questions; Externality and External Perception—Matter—Space and Time—Causation and Power; the origin, nature, and limits of Human Knowledge—the Finite and the Infinite.

Moral Philosophy.—Moral Actions; the Moral Faculty; Desires and Emotions; the Will; Moral Obligation; the Existence and Attributes of God; the relation of Absolute Sovereignty to finite existence, and specially to human will; the Origin of Evil; the Immortality of the Soul; Practical Ethics, with the laws regulating the formation of moral character, and the guidance of individual and social life.

History of Philosophy—Metaphysical.—The History of Logic—Formal and Inductive; a general knowledge of the History of Ancient and Modern Psychology and Metaphysics, special study of Plato, or Aristotle; special study of Locke, Berkeley, Hume, and Kant, with the subsequent History of Agnosticism, Gnosticism, and the Philosophy of Faith.

History of Philosophy—Moral.—The relation of the pre-Socratic Philosophy to Moral Philosophy; the Socratic theory, as in the Memorabilia; the Platonic theory, as in the Republic; the Aristotelian, Stoic, and Epicurean theories; the theories of Hobbes, Spinoza, Cudworth, Price, Hume, and Kant, with the later developments of Intuitional and Utilitarian Ethics.

6. The examinations will be held annually in April, both orally and by writing. 7. Masters of Arts in this University with First-class Honours in Mental Philosophy may obtain the Doctorate in Mental Science at a period of not less than three years after they have obtained such Honours, after submitting a sufficient thesis, on a subject approved by the Science Degrees Committee (D and E), and on giving such other evidence of increased proficiency in the Mental Sciences as may be satisfactory to the Senatus. 8. The *fee* for the degree of Doctor in Mental Science is £7 7s. The fee must be paid to the Secretary of the Senatus at least ten days before the date of examination (or in the case of candidates admitted under Rule 7, at least ten days before graduation), when the diploma and certificates of the candidate must be shown to the Dean of the Faculty of Arts. In the event of the candidate not passing, the fee is not returned, but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one-half of the fee.

E.—Degree of Doctor of Science in Philology.—The degree of Doctor of Science is open to candidates highly proficient in Philology. 1. The candidate must be a graduate, by examination, of a British or recognised Indian or Colonial University. 2. He must be matriculated for the year in which he appears for examination or graduation. 3. He must have attended for at least one academic year at this University, and during that year he must have taken at least two classes on the subjects embraced in the examination. 4. The candidate must send to the Dean of the Faculty of Arts, *at least one month* before proceeding to examination, a thesis, giving evidence of original research, on some point of philological or archæological research, on a subject previously approved by the Science Degrees Committee (Sections D and E). Mere compilations will not be accepted. The candidate can be admitted to examination only after this thesis has been found satisfactory by the examiners. 5. The candidate may then offer himself for examination in any one of the following branches: (1) The Latin and Greek Languages; (2) the Semitic Languages. It is expected that candidates for a degree in Philology, in this branch, besides being critically acquainted with the Book of Job and with the Psalms in Hebrew and the Gospels and

Acts in Syriac, should know the first four Surat or Chapters of the Koran, and be capable of turning sentences of English into Hebrew, Syriac, and Arabic—supplying, at the same time, the proper vowels and diacritical marks. Some knowledge of Arabic prosody will also be expected. (3) The Sanskrit Language and Comparative Philology.* (*a*) Sanskrit Language and Literature; Translation of passages from current Sanskrit Authors into English, and from English into Sanskrit. (*b*) Comparative Philology of the Indo-European Languages, Acquaintance with the principles of the Science, as laid down in the Comparative Grammar of Bopp, Schleicher's "Compendium," and Müller's and Whitney's "Lectures." (*c*) Philosophy of Language. Candidates must shew some degree of familiarity with the works of Curtius' "Grundzüge;" Peile's "Introduction;" Horne Tooke's "Diversions of Purley;" Lersch, "Sprach-philosophie der Alten;" Heyse, "System der Sprachwissenschaft;" Schœmann, "Die Lehre von den Redetheilen;" Steinthal, "Der Ursprung der Sprache." 6. Candidates for the degree of Doctor of Science in Classical Philology will be tested in respect of their general scholarship by translation from Latin and Greek authors, and by composition in Latin and Greek prose. They will further be required to profess a critical knowledge of some special department or epoch of Classical Literature, or of some three or four of the more difficult and important classical writers. 7. The examinations will be held annually in April. Candidates may be tested both orally and by writing. 8. Those who have taken the degree of Master of Arts in this University, with First-class Honours in the Department of Classical Literature, may obtain the degree of Doctor of Science in Philology, when a period of not less than three years shall have elapsed after they have obtained such Honours, after submitting a sufficient thesis on a subject approved by the Science Degrees Committee (Sections D and E), and by such other evidence of increased proficiency in Philological Research as may be satisfactory to the Senatus. 9. The *fee* for the degree of Doctor of Science in Philology is £7 7s. The fee must be paid to the Secretary of the Senatus at least ten days before the date of examination (or in the case of candidates admitted under rule 7, at least ten days before graduation), when the diploma and certificates must be shown to the Dean of the Faculty of Arts. Non-return of fees, as in sec. D.

SCIENCE FELLOWSHIP AND SCHOLARSHIPS.—The following fellowship and scholarships are open to graduates in Science: (1) The

* Dr. John Muir has offered a sum of £100 to the most distinguished candidate who shall first succeed in taking the degree of D.Sc. in the Department of Sanskrit and Comparative Philology. See under *University Prizes*.

Falconer Memorial fellowship, in Palæontology and Geology, of the annual value of about £100, tenable for two years or more, according to circumstances (see under *Fellowships, &c.*), is open to graduates in Science or Medicine of this University of not more than three years' standing at the date of the examination. (2) The *Baxter Physical Science scholarship*, tenable for two years, is awarded to the most eminent of the Bachelors of Science who have passed their examinations in the Physical Sciences, including Experimental Philosophy and Chemistry, either in the year preceding a vacancy or in the year in which a vacancy occurs. The scholarship is held subject to the condition that the holder shall have taken the degree of Doctor of Science in the first year of his tenure of it. Annual value, £60. (3) The *Baxter Natural Science scholarship*, tenable for two years, is awarded to the most eminent of the Bachelors of Science who have passed their examinations in the department of Natural Sciences, including Botany, Zoology, Physiology, and Geology, either in the year preceding a vacancy or in the year in which a vacancy occurs. Annual value, £60. The scholarship is held subject to the condition that the holder shall have taken the degree of Doctor of Science in the first year of his tenure of it.

ANNUAL CEREMONIALS FOR GRADUATION AND ACADEMIC COSTUME.*—The Public Ceremonial of Graduation in Arts, Law, and Theology is held annually in April. Degrees in Medicine are publicly conferred on the 1st of August in each year. Graduates must appear on these occasions in the academical costume proper to their degree. The ordinary form of gowns worn by graduates of the University is the same in all the Faculties—viz., black silk or stuff, with long sleeves. The distinctive part of the costume is the hood appropriated to each Faculty. These hoods are as follow: LL.D., black cloth, lined with blue silk; LL.B., black silk, lined also with blue silk, bordered with white fur; D.D., black cloth, lined with purple silk; B.D., black silk, lined also with purple silk, bordered with white fur; M.D., black cloth, lined with crimson silk; M.B. and C.M., black silk, lined with crimson silk, bordered with white fur; Sc.D., black cloth, lined with green silk; Sc.B., black silk, lined with green silk, bordered with white fur; M.A., black silk, lined with white silk.

Full Dress for the Doctors of Law, Medicine, and Science.—Gown of superfine scarlet cloth, loose sleeves, the cape and facings down the front covered with, and the sleeves lined with rich silk of the colour proper to the degree. Cap of black silk velvet after the John Knox fashion.

* The relative precedence of each Faculty is as follows: (1) Divinity; (2) Law; (3) Medicine; (4) Arts. The Deans take precedence in their respective Faculties, followed by the members of their Faculties in the order of dates of their commission.

University Bursaries.

I.—Bursaries in the Faculty of Arts:

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
			£ s. d.			£ s. d.	
I.	16—	George Heriot.	200 0 0	12	4	*20 0 0	Governors of Geo. Heriot's Hospital.
II.	16—	Do. do.	Regulated by No. of Candidates.	5	4	30 0 0	Do.
III.	1619	Archibald Johnston, Merchant in Edin.	11 2 2	1	4	11 2 2	Earl of Haddington.
IV.	1622	John Trotter of Mortonhall.	4 10 1	1	4	4 10 1	Trotter of Mortonhall.
V.	1626, 1629, 1640	Hugh Wight and David M'Call.	4 14 5	1	4	4 14 5	Town Council and Louis of Plean, two choices alternately.
VI.	1639	Mr. Robt. Johnstone of London.	25 0 0	2	4	12 10 0	Johnstone of Annandale.
VII.	1639	Do. do.	25 0 0	2	4	12 10 0	Town Council.
VIII.	1642, 1653	Mausier Weir, relict of R. Dobie, Mer., and Dean of Guild of Edin., and D. Jenkins, Mer., Edin.	5 11 1	1	4	5 11 1	Town Council.
IX.	1644	Jas. Dalgliesh, Merchant, Edin.	11 2 2	1	4	11 2 2	Do.
X.	1673	Jno. M'Morran, Merchant.	2 15 6	1	4	2 15 6	Do.
XI.	1678	John Penman, Bailie and Merchant, Edinburgh.	14 15 0	1	4	14 15 0	Society for the Benefit of the Sons of the Clergy.
XII.	1678	Hector Ford of Branxton.	33 6 8	3	4	11 2 2	Town Council.
XIII.	1687	Sir Andrew Ramsay of Abbotshall.	11 2 2	1	4	11 2 2	Do. and Ministers of Edinburgh.
XIV.	1696	Hepburn and Lightbody.	5 16 8	1	4	5 16 8	Town Council and Campbell of Aberuchill, alternately.
XV.	1698	Ad. Chrystie, Under Clerk of Session.	18 0 0	1	1	18 0 0	Faculty of Advocates.
XVI.	1702	Thos. Bryson, Bailie and Merchant in Dunbar.	10 0 0	2	4	5 0 0	Ministers of the Presbytery of Dunbar.
XVII.	1708	James Pringle of Torwoodlee.	6 7 9		4	6 7 9	Pringle of Torwoodlee.
XVIII.	1714	Rev. Robert Brown, of Protestant Consistory at Zamosc.	25 0 0		4	15 0 0, 10 0 0	Town Council.
XIX.	1723	Alexander Mitchell, W.S.	8 6 8	1	4	8 6 8	Livingston Learmonth of Parkhall.
XX.	1725	William Wardrope, Lister, Edinburgh.	5 11 1	1	4	5 11 1	Wardrope of Torbanehill.

* As nearly as the amount averages.

BURSARIES (*continued*).

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income. £ s. d.	No. of Bursars.	For Years.	Annual Allowance to each Bursar. £ s. d.	Patrons.
XXI.	1726	David Christie, Wigmaker, Edinburgh.	8 6 8	1	4	8 6 8	Town Council.
XXII.	1734	Laurence Dundas, Professor of Humanity in the University of Edin.	*44 0 0	2	4	*22 0 0	Jas. Dundas of Dundas, Robt. Dundas of Arniston, and Dundas of Carronhall, by turns.
XXIII.	1764 1766	Rev. J. Penman, Min., of Bothkenner.	5 8 0	1	4	5 8 0	Little Gilmour of Craigmillar.
XXIV.	1768	Thos. Fraser, Clerk in the office of City Clerk, Edinburgh.	36 0 0	2	7	18 0 0	The Provost, Dean of Guild, and Treasurer of Edinburgh.
XXV.	1778	Jas. Shortt, Optician, Edinburgh.	9 0 0	1	4	9 0 0	Earl of Morton.
XXVI.	1784	William Hume, Eastbarns, Dunbar.	16 0 0	2	4	8 0 0	Ministers of the Presbytery of Dunbar.
XXVII.	1784	Rev. Jas. Millar and Spouse.	24 0 0	1	4	24 0 0	Kirk-Session of Kippen.
XXVIII.	1809	Dr. Donald Grant of London-street, in the parish of St. Pancras, London.	180 0 0	2	4	90 0 0	Earl of Seafield, and James Mackenzie, W.S., and their reps., as Dr. Grant's Trus.; whom failing, the Sen. Acad.
XXIX.	1810	Rev. James Stewart.	30 0 0	3	3	10 0 0	Senatus Academicus.
XXX.	1821	Sir J. M'Pherson.	*96 0 0	2	2	*48 0 0	Senatus Academicus.
XXXI.	1837	James Menzies.	200 0 0	4	4	25 0 0	Sir Robert Menzies, Bart., and the Ministers of Dull, Weem, and Fortingall.
XXXII.	1838	Robert Blair, D.D., Barton St. Andrews, Norfolk.	10 0 0	1	4	10 0 0	Principal and Professors of Humanity, Greek, Mathematics, Logic, and Metaphysics, and Moral Philosophy.
XXXIII.	1846	John Jamieson, Esq., Edinburgh.	*26 0 0	1	4	*26 0 0	Principal and two Professors of the University.
XXXIV.	1846	G. P. Bidder, C.E.	40 0 0	1	4	40 0 0	Senatus Academicus.
XXXV.	1852	Wm. Lennie, Esq.	48 0 0	4	...	12 0 0	Town Council.
XXXVI.	1853	John Bruce, Esq., Trinity Crescent, Edinburgh.	160 0 0	1 4	4 4	40 0 0 30 0 0	Do.
XXXVII.	1858	M'Diarmid Trustees.	10 0 0	1	8	10 0 0	Senatus Academicus.
XXXVIII.	1860	Wm. Patrick, Esq., of Roughwood.	*90 0 0	1 1	2 2	*60 0 0 *30 0 0	Principal and Professors in Arts.
XXXIX.	1858	Edinburgh Ayrshire Club.	50 0 0	2	2	25 0 0	Edinburgh Ayrshire Club.

* As nearly as the amount averages.

BURSARIES (*continued*).

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income. £ s. d.	No. of Bursars.	For Years.	Annual Allowance to each Bursar. £ s. d.	Patrons.
XL.	1863	Peeblesshire Society.	40 0 0	3	4	{10 0 0 / 15 0 0}	Peeblesshire Society.
XLI.	1864	Ed. Galloway Asso.	20 0 0	1	4	20 0 0	Edin. Galloway Assoc.
XLII.	1864	Ed. Caithness Asso.	10 0 0	1	4	10 0 0	Edin. Caithness Assoc.
XLIII.	1864	A. H. Rhind of Sibster.	†500 0 0	1	4	*20 0 0	Ed. Caithness As.
XLIV.	1865	Mrs. Margt. Tyndall Bruce, of Falkland	165 0 0	{3 / 3}	{3 / 3}	{35 0 0 / 20 0 0}	Senatus.
XLV.	1865	Horsliehill Scott Bursaries.	82 0 0	2	2	41 0 0	Do.
XLVI.	1867	Miss Hannah Harrison, of Lasswade.	37 0 0	1	2	37 0 0	Do.
XLVII.	1867	Rev. John Spence.	*100 0 0	2	4	‡50 0 0	Trustees of Rev. J. Spence.
XLVIII.	1869 1872	Edin. Border Counties Association.	50 0 0	2	4	30 0 0 & 20 0 0	Edinburgh Border Counties As.
XLIX.	1869	Argyllshire, Bute, and Western Isles Asso.	12 0 0	1	4	*12 0 0	Argyllshire Association.
L.	1870	Stewart of Ardvoirlich.	*14 8 0	1	4	*14 8 0	Proprietor of the Estate of Ardvoirlich.
LI.	1870	Hugh Cowan.	*30 0 0	1	2	*30 0 0	Directors of Ayr Academy.
LII.	1871	J. Robertson Sibbald.	*150 0 0	5	4	30 0 0	Tr. of Dr. J. R. Sibbald.
LIII.	1872	Angus Club.	25 0 0	1	4	25 0 0	Angus Club.
LIV.	1873	Earl of Zetland.	*40 0 0	1	3	40 0 0	Trustees of Earl of Zetland.
LV.	1873	The Grierson Trus.	*104 0 0	5	4	{20 0 0 / 24 0 0}	Senatus.
LVI.	1874	Upper Ward of Lanarkshire.	20 0 0	2	4	20 0 0	Upper Ward Association.
LVII.	1874	Johnstone of Harthope.	*20 0 0	1	4	*17 10 0	Senatus.
LVIII.	1874	James Lambert.	*40 0 0	1		*20 0 0	Senatus.
LIX.	1874	Fife, Clackmannan, and Kinross Assoc.	15 0 0	1	4	15 0 0	Fife, &c., Assoc.
LX.	1875	Robert Marshall.	*40 0 0	1	4	*35 0 0	Senatus.
LXI.	1876	J. Fothringham of Heathpool.	*40 0 0	2	4	*17 10 0	Senatus.
LXII.	1877	Earl of Zetland.	*165 0 0	4	3		Trustees.
LXIII.	1878	Edin. 'E. Lothian Assoc.	20 0 0	1	3	20 0 0	Association.
LXIV.	1878	{Edin. University Endowment Ass.}	100 0	5	3	20 0 0	Senatus Academicus.
LXV.	1878	Jas. Gillan.	105 0 0	3	3	35 0 0	Trustees of J. Gillan.
LXVI.	1878	Dr. Andrew Thomson.	100 0 0	4	4	25 0 0	Trustees of Dr. Thomson.
LXVII.	1880	Rev. John Patterson.	*20 0 0	1	4	*20 0 0	Senatus Academicus.
LXVIII.	1880	High. and Agri. Soc.	200 0 0	10	1	20 0 0	Highland Society
LXIX.	1881	Thomas Carlyle.	*250 0 0	10	4	*25 0 0	Senatus.

* As nearly as the amount averages. † Interest only of this amount.

‡ Annual allowance, a sum somewhat above £50.

Conditions of the Foundations.—I. These *Heriot bursaries* are for students unconnected with the Hospital, entering upon the regular curriculum in Arts, who upon examination exhibit evidences of good scholarship. II. *Do.* Young men who, upon leaving Heriot's Hospital, are, after examination, declared hopeful scholars, and fit to follow any of the liberal professions, are entitled to a bursary of £30 a year for four years, with a view to attendance on the regular course in Arts. III. *A. Johnston bursary*: Each bursar is entitled to hold the Archibald Johnston bursary for four years, subject to the conditions that he shall pass such examination as may be required of presentation bursars, and shall proceed through the curriculum in Arts, and pass the Departmental examinations for M.A. appropriate to each year. No one is permitted to hold the bursary along with any other bursary in the University. The bursar must attend the classes in the Arts curriculum. IV. *Trotter bursary.* V. *Wight and M'Call bursary.* VI. and VII. *R. Johnstone bursaries*: By Ordinance No. 82, the holder of each of the four Robert Johnstone bursaries is entitled to hold his bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of presentation bursars, and shall proceed through the curriculum in Arts, and regularly pass the Departmental examination required of students proceeding to the degree of M.A. No person is allowed to hold any of these bursaries along with any other bursary in the University. VIII. *Weir and Jenkins bursary*: For a student in Arts, who must follow the curriculum for the Degree. IX. The *Dalgliesh* bursar is entitled to hold the bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of presentation bursars, and shall proceed through the curriculum in Arts in the University, and regularly pass the Departmental examinations required of students proceeding to the degree of M.A. No person is allowed to hold the bursary along with any other bursary in the University. X. *M'Morran bursary*: This bursary is for a student of Philosophy in the Arts curriculum. XI. *Penman bursar*: The bursar must attend the classes in the Arts curriculum. XII. Each *Ford* bursar is entitled to hold his bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of presentation bursars, and shall proceed through the curriculum in Arts, and regularly pass the Departmental examinations required of students proceeding to the degree of M.A. No person is permitted to hold any of the bursaries along with any other bursary in the University. XIII. Each *Sir A. Ramsay* bursar holds his bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of presentation

bursars, and shall proceed through the curriculum in Arts, and regularly pass the Departmental examinations required of students proceeding to the degree of M.A. No person is permitted to hold either of the bursaries along with any other bursary, fellowship, or scholarship of any Scottish university. XIV. The *Hepburn and Lightbody bursary* was founded by Sir Colin Campbell, Lord Aberuchill, and Sir Patrick Aikenhead, as executors of Sir Patrick Hepburn of Blackcastle. It is for a student of Philosophy who follows the curriculum in Arts. XV. The *Chrystie bursary* is usually held for four years. The bursar is taken bound to attend "the usual classes," and must produce yearly to the Faculty a certificate from the respective professors of his due attendance, and the diligent prosecution of his studies. Candidates are referred for information to the Clerk to the Faculty of Advocates, Parliament House. XVI. The *Bryson* bursars are first to enter the Humanity class; afterwards they are to pass through the rest of the classes in Arts until their laureation; at which time, if judged by the ministers of the Presbytery of Dunbar fit for the study of Theology, they may continue for two years in Theology. XVII. The *Pringle bursary* was founded by James Pringle, of Torwoodlee, for a bursar in Philosophy and Divinity. XVIII. The *Brown bursaries* are payable to bursars in the regular course of study in Arts. XIX. The *Mitchell bursary* is payable to a student during a regular course of four years in the Faculty of Arts, and during two years (if the patron think fit) at the Divinity classes. XX. The *Wardrope bursary* is for the maintenance and support of a bursar of Philosophy in the University. XXI. This *Christie bursary* may be held by a student during a regular course of four years in the Faculty of Arts. XXII. *Dundas bursaries*: The patrons are directed to prefer the mortifier's near relations; failing such, those of the surname of Dundas; and failing such, any other persons at their discretion. By Ordinance No. 78 of the Universities' Commissioners, each person presented to either of the Dundas bursaries is entitled to hold the same for four years as a student of Arts, subject to the condition that he shall pass such entrance examination as may be required of presentation bursars, and shall proceed through the curriculum in Arts, and shall regularly pass the Departmental examinations required for M.A. XXIII. The *Penman bursary* is payable to a "Student of Philosophy" for the period of four years at the University of Edinburgh, in the regular curriculum of Arts. XXIV. The *Fraser bursaries* are for maintaining two students of the name of Fraser, till they finish their course and take the degree in the Faculty of Arts, and for three years thereafter; they making their election whether to

follow Divinity, Law, or Medicine. Two classes at least must be attended each winter session. Candidates should apply to the City Clerk, Council Chambers, Edinburgh. XXV. The primary object of the *Shortt Mortification* is the establishment of a Bursar of Mathematics. The bursar must attend the classes in the curriculum in Arts. XXVI. The conditions of the *Hume Mortification* correspond with those of Bryson's, No. XVI., and the presentations and payments are made as in that case. XXVII. *Millar bursary*: To be held by a student intended for the Ministry in the Church of Scotland, during his curriculum in the Faculty of Arts. XXVIII. The *Grant Mortification* is for two students of the University of Edinburgh, of the name of Grant. The holders must attend at least three classes in the Faculty of Arts during each winter session, and certificates to that effect are required before their bursaries are paid. Application for information may be made to Messrs. Mackenzie, Innes, and Logan, W.S., 23, Queen-street, Edinburgh. XXIX. *Stewart bursaries*: Candidates must be in the *second* year of attendance in the Faculty of Arts. Bursars must attend Logic and the other classes usually attended in that year, with a view to the degree in Arts. XXX. The *Macpherson bursary* is intended for the benefit of students who are natives of the Highlands. It is now bestowed on a student at the commencement of the *third* year of his regular course in Arts, with a view to the degree. It is tenable for two years, during which the bursar must attend classes in the Faculty of Arts. Candidates must have a knowledge of Gaelic. XXXI. *Menzies*: These bursaries, four in number, were founded in 1837, by James Menzies, Esq., Glasgow. They are of the annual value of £25 each, and tenable for four years, in any one of the universities of St. Andrew's, Glasgow, or Edinburgh. Preference first to the relations of the founder, next to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Weem, and Fortingall; failing whom, any student who shall be found best qualified may be appointed. Patrons: Sir Robert Menzies, Bart., and the Ministers of the parishes of Dull, Weem, and Fortingall. XXXII. The *Blair* bursar must attend the classes in the required order, and pass the Departmental examinations necessary for the degree of M.A. Applications to be made to the Professor of Logic and Metaphysics. XXXIII. The *Jamieson bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and, primarily, other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Roberton, Culter and Biggar. The bursar must attend the usual classes, and

pass the Departmental examinations necessary for the degree in Arts. XXXIV. Called the "*Jardine bursary*," being founded by Mr. Bidder, C.E., as a memorial of the munificence of Sir Henry Jardine to him, to which he owed the advantage of his education at the University of Edinburgh. Candidates must be natives of Scotland. The bursar must attend the classes, and pass the Departmental examinations necessary for the degree in Arts. XXXV. *Lennie bursaries*: Bursars must attend the classes in the Arts curriculum. Candidates should apply to the City Clerk, Council Chambers, Edinburgh. XXXVI. *Bruce bursaries*: Prior to the commencement of each winter session, five students are presented yearly, the most distinguished of the five receiving the £40 Bruce bursary. The bursars must be in regular attendance on the classes necessary for the degree of Master of Arts. Candidates announce their names at the Council Chambers to the City Clerk. XXXVII. The *M'Diarmid bursary* is a memorial of the late John M'Diarmid, Esq., Editor of the *Dumfries and Galloway Courier*. Candidates must be natives of the county of Dumfries or the stewartry of Kirkcudbright. The bursar must attend the classes and examinations necessary for the degree in Arts. Applications regarding the bursary to be made to H. Gordon, Esq., Dumfries. XXXVIII. The *Patrick bursaries* are for the assistance of those who have completed a course of education at any of the public schools or academies in the county of Ayr, where a course of Classical study is pursued, and who are thus in a condition to apply for admission into the University. Their value fluctuates, being, for the first, two-thirds of the dividend on £3,000 Glasgow and South-Western Railway Stock; and for the second, the remaining third of said dividend. The bursars must attend the classes and examinations necessary for the degree in Arts, in the order required by the Faculty. See "Calendar" for 1865-66. XXXIX. *Ayrshire Club bursaries*: Awarded after competitive examination to natives of Ayrshire requiring aid, and tenable during the curriculum in Arts, on condition of regular attendance at the classes, with a view to the degree. Information will be afforded by the Secretary of the Club. XL. *Peebles-shire bursaries*: Candidates must be natives of Peeblesshire, must have been educated at a school or schools within the county of Peebles, and must pursue the curriculum of Arts at the University, with a view to the degree in Arts. Schedules will be supplied to applicants by the Secretary of the Society. XLI. *Galloway bursary*: Awarded after competitive examination to a student about to enter the curriculum in Arts, with a view to a degree in Arts. Application to be made to W. Guthrie, Esq., Sheriff-Sub., Glasgow. XLII. and XLIII. *Caithness and Rhind bursaries*: Bursars must

attend the classes in the Arts curriculum. Apply to Andrew Snody, Esq., S.S.C., Edinburgh, Secretary to the Association. XLIV. *Bruce of Grangehill and Falklands bursaries*: Three of these bursaries, of the annual value of £35, are awarded after competitive examination to students of the *second* year in their course of study for a degree in Arts; and three others, of the annual value of £20, to students entering the *first* year of the Arts curriculum. XLV. *Horsleyhill-Scott bursaries*: Annual value £35 to £41, under deduction of £6 6s. for Examiners' fees from first year's payments. Open to students in the *third* year of their course for a degree in Arts, and tenable for two years. The examination is in Classics, Mathematics, and Logic and Metaphysics. Deed of foundation, at p. 208 of "Calendar" for 1866-67. XLVI. The *Harrison bursary* is of the annual value of from £32 to £37, under deduction of £6 6s. of Examiners' fees from first year's payments. Open to students in the *third* year of their course in the Faculty of Arts, with a view to a degree, and is tenable for two years. It is to be awarded to the competitor who shall show the greatest proficiency in Classics, Mathematics, and Logic and Metaphysics. XLVII. By the regulations of the Trustees, the *Spence bursaries* are open to students under twenty-one about to enter on the second or third session of their course, who are proceeding to graduation within two years after their appointment. After graduation, the bursars may proceed to the study of their profession, or else devote themselves to special study in Theology, Philosophy, Science, or History. They must give attendance at this University on at least one University Class on the special subject to which they devote themselves. Further information will be afforded by Mr. J. Patullo, writer, Dundee. XLVIII. *Border Counties and Sir Walter Scott bursaries*: Candidates must be natives of the counties of Roxburgh, Berwick, or Selkirk, and must attend the classes necessary for a degree in Arts. Application to be made to Mr. T. Usher, Sheriff Court House, Edinburgh. XLIX. *Argyllshire bursary*: To be held by natives of Argyllshire, Bute, or Western Islands. The holder must attend the classes necessary for a degree in Arts. Application may be made to Donald Beith, Esq., W.S., 41, Castle-street, Edinburgh. L. *Ardvoirlich bursary*: Open to students of Arts, natives of the parishes of Comrie, Balquhidder, Callander, and Killin. The holder must attend classes necessary for a degree in Arts. Applications to be made to the Proprietor of the estate of Ardvoirlich, or his factor. Candidates are examined by a Board, of which the Minister of Comrie is chairman. LI. *Cowan bursary*: Candidates must be about to enter the curriculum in Arts. Information will be afforded by W. F.

M'Cubbin, Esq., Ayr. LII. *Sibbald bursaries*: The bursaries shall each be tenable for three years, and shall be available to students in the Faculty of Arts, Medicine, Law, or Divinity. *Second*, the bursaries shall be bestowed upon, and shall be held by, students entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other bursary or scholarship*; but it shall be no objection to a candidate that he has, during the previous summer session, attended any of the classes in the University of Edinburgh required by the Faculties of Medicine or Law. *Third*, the bursaries shall be competed for by examination at the commencement of each winter session, and shall in every case be bestowed upon the candidates in their order of merit. *Fourth*, the competitive examination for the said bursaries shall be conducted by such examiners, and under such regulations, satisfactory to the Trustees, as the Senatus Academicus shall from time to time appoint. Until further announcement the examination shall embrace the following subjects: 1. *Latin*—Translation from Latin into English, and from English into Latin; with questions Grammatical and Literary. 2. *Greek*—Translation from Greek into English, and from English into Greek; with questions Grammatical and Literary. 3. *Mathematics*—Arithmetic; Euclid six books; Elements of Trigonometry; and Conic Sections treated Geometrically. 4. *English*—Grammar and Composition. *Fifth*, before being admitted to compete, each candidate must produce to the Trustees, or to their factors and cashiers, a certificate by a professor of the University of Edinburgh, or by a householder in Edinburgh, or from a former teacher, to the effect that he is a person of respectability and good conduct. *Sixth*, in the event of a bursar being expelled or rusticated from the University, he shall *ipso facto* forfeit his bursary during the remainder of its currency. *Seventh*, it shall be in the power of Dr. Sibbald's Trustees at any time, on a report from the Principal of the University for the time being, of misconduct on the part of the holder of any bursary, to declare forfeited, or to suspend for such period as they may think proper, any of the bursaries. *Eighth*, the said bursaries shall be payable by two equal portions, on 11th November and 15th April—beginning the first payment of one-half of each year's bursary on 11th November immediately following the commencement of the winter session, and the payment of the second half thereof on 15th April thereafter, and so on during the currency of each bursary; and each bursar shall produce to the Trustees, or to their factors and cashiers, in order to entitle him to receive payment of the first instalment, the tickets for the classes which he is to attend during the then current session; and

in order to entitle him to receive payment of the second instalment, certificates of regular attendance at said classes; and every bursar shall attend in each winter session at least two classes in the University of Edinburgh. Application to be made to Messrs. Mackenzie, Innes, and Logan, W.S., 23, Queen-street, Edinburgh. LIII. *The Angus Club bursary*: For particulars application may be made to the Secretary of the Club, Mr. Burness, 11, Drummond-place. LIV. *Orkney and Zetland bursary*: Open to first year's students (male or female), natives, or children of parents who are natives of, the county of Orkney and Zetland. It is tenable for three years. The bursar must attend the classes in the curriculum in Arts, with a view to a degree. Applications to be sent to Messrs. H. G. and S. Dickson, W.S., 12, Castle-terrace, Edinburgh. LV. *Grierson bursaries*: Four bursaries of £20 each, and one of £26, awarded annually in November, under the patronage of the Senatus. By the scheme of allocation arranged with the Trustees, they are restricted in the first place to natives of either of the parishes of Crawford or Leadhills, provided that any such shall lodge an application with the Secretary of the Senatus on or before the 1st of October in each year; but before any such preferential candidate can be appointed, he must pass an examination, satisfactory to the Senatus, in Elementary Latin, English, and Arithmetic, and also satisfy the Senatus that he is steady and well behaved, that he has shewn himself a diligent scholar, and that he requires pecuniary aid to enable him to pursue his studies. In the event of more than one preferential candidate, the examination is competitive among such candidates. If no preferential candidates announce themselves to the Secretary of the Senatus before the 1st of October, the bursary is for that year thrown open for competition to all students then intending to enrol in the University for the first session of the curriculum in Arts, the subjects of examination being those prescribed for bursars of the first year. The Grierson bursary is tenable for four years, provided that the bursar continues regularly to follow the curriculum in Arts during that period; and if he should complete his curriculum within three years, the Senatus may continue it for one other year, provided the bursar pursues further his studies in the higher classes of the curriculum in Arts, or in one of the Faculties of the University, and that they are satisfied with his progress and conduct. LVI. *Lanarkshire* (Upper Ward of) *bursaries*: Bursars must attend the classes in the Arts curriculum. LVII. *Johnstone of Harthope bursary*: Natives of Moffat, Peebles, and students of the name of Alexander or Johnstone preferred. LVIII. *Lambert bursary*: This bursary will not be instituted until after the death of an annuitant. LIX. *Fife and Kinross bursary*:

Open only to students from Fife, Clackmannan, and Kinross. Applications may be made to the Secretary, W. B. Glen, 6, North St. Andrew-street, Edinburgh. LX. *Marshall bursary*: Restricted in the first place to relatives of founder, next to students of the name of Marshall and natives of West Lothian. LXI. *Fotheringham and Forrest bursaries*: Relatives or namesakes of the founder, then such as are of the name of Forrest, to be preferred. LXII. *Earl of Zetland's bursaries*: For deed of foundation of these bursaries, *see* p. 373 of "Calendar" for 1877-78. Application may be made to Messrs. Dickson, W.S., Castle-terrace. LXIII. *Edinburgh East Lothian Association's bursary*: Open to any lads educated at any public school in East Lothian, and who, during three years immediately preceding the examination, have not attended any school out of the country, or any university. Application may be made to J. Purves, S.S.C., 37, George-street. LXIV. *Edinburgh University Endowment Association's bursaries*: They are open to students entering the Faculty of Arts for the first time, and the examination is held at the annual Arts Bursary competition. Bursars must proceed through the curriculum in Arts, and pass the examinations for the degree of M.A. Cannot be held with any other bursary. LXV. *Gillan bursaries*: Founded in 1878 by James Gillan, Forres. Three of £35 each, two open to natives of Forres, and one to natives of Dyke. Candidates must attend the Arts curriculum in the University of Edinburgh, and afterwards the New College, Edinburgh, with a view to the ministry of the Free Church. For particulars application may be made to Messrs. R. and R. Urquhart, Solicitors, Forres. LXVI. *Thomson bursaries*: Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries or of the city of Edinburgh, preferred. Apply to Messrs. Traquair, Dickson, and Maclaren, W.S., 11, Hill-street. LXVII. *Patterson bursary*: For Anglo-Saxon. To come into operation on the death of an annuitant. LXVIII. *Highland and Agricultural Society's bursaries*: The Society annually grants £200 for ten bursaries of £20 each, tenable for one year, at the University of Edinburgh, for the purpose of enabling the holders to take the classes necessary to qualify for the Society's certificate or diploma, to be determined by examination held in Edinburgh by the Society's examiners. LXIX. *John Welsh bursaries*, founded by Thomas Carlyle in 1881, in memory of his father-in-law, to whom the estate of Craigenputtock in Dumfriesshire, bequeathed by Mr. Carlyle to the University of Edinburgh, formerly belonged. The bursaries are to be paid from the rents of that estate, and are ten in number, of the value of about £25 each, tenable for four years. They are to be awarded after competition, and to be given to

students entering the University, and who have not studied in any other university. Five are to be given to the competitors most proficient in Mathematics, and five to those most proficient in Classics. The examiners are to be professors in the University. They are not to be held with any other bursary.

II.—BURSARIES IN FACULTY OF DIVINITY.—*A.—Presentation bursaries*:

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar	Patrons.
			£ s. d.			£ s. d.	
I.	1703	Agnes Nairne.	3 0 0	1	1	...	Senatus Acad.
II.	1715	Sir James M'Lurg of Vogrie, sometime Dean of Guild of Edinburgh.	8 6 8	1	4	8 6 8	Dean of Guild of Edinburgh and Andrew Webster, S.S.C., alternately.
III.	1764	Rev. John Penman, Minister of Bothkennar.	8 0 0	1	4	8 0 0	Little Gilmour of Craigmillar.
IV.	1766	Rev. Robert Alexander, Minister of Girvan.	*19 0 0	1	4	*19 0 0	Kirk-Session of Girvan and Presbytery of Ayr.
V.	1838	Robert Blair, D.D., Barton St. Andrews, Norfolk.	14 8 0	1	4	14 8 0	Governors of Geo. Heriot's Hospital, Principal of the University, Minister of the High Church, and Minister of New Greyfriars' Church.
VI.	1838	Do. Do.	*23 0 0	1	4	*23 0 0	The Principal, and Profs. of Hebrew, Divinity, Church History.
VII.	1838	J. Stewart Hepburn, of Colquhalzie, Esq.	13 2 6	1	3	13 2 6	Committee of the Presbytery of Edin.
VIII.	1858	Do. Do.	13 2 6	1	3	13 2 6	Do.
IX.	1864	Do. Do.	13 2 6	1	3	13 2 6	Do.

I. In abeyance at present. II. The *M'Lurg bursary* is tenable for four years at the Theological classes. III. The *Penman bursary*. IV. This bursary consists of the interest of £420, lent on heritable security, and of £75 17s. of accumulated interest. It must be held by a student from the parish of Girvan, presented by the session; whom failing, by one within the Presbytery of Ayr, to be appointed by the Presbytery. V. The *Blair bursary* can be held only by a young man who has been brought up in George Heriot's Hospital, and has become a student of Divinity in the University of Edinburgh. The amount depends on the

* As nearly as the amount averages.

rate of dividend payable on the stock in which the foundation money is invested. VI. To be applied for the benefit of a student of Divinity, whether a graduate or not. VII., VIII., and IX. The sums attached to these bursaries are payable to Divinity students of the first or second year towards the expense of their education at the University of Edinburgh. Each is tenable for three years. For one bursary Gaelic-speaking students have a preference; for all, students from the presbyteries of Weem and Auchterarder.

B.—Competition bursaries:

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar	Patrons.
			£ s. d.			£ s. d.	
I.	1646	Buchanan of that Ilk.	20 16 8	2	3	10 8 4	Town Council.
II.	1666	William Struthers.	13 17 9½	1	3	13 17 9½	Do.
III.	1685	Archibald Leighton.	7 10 0	1	3	7 10 0	Do.
IV.	1687	Andrew Ramsay and Sir Andrew Ramsay of Abbotshall.	16 13 4	1	3	16 13 4	Do.
V.	1695	King William III.	50 0 0	2	2	25 0 0	Lords of the Treasury.
VI.	1867	Miss Mary Ettles of Inverness.	*120 0 0	3	3	*40 0 0	Senatus.
VII.	1873	Grierson of Ogscastle's Trustees.	80 0 0	3	1	26 13 4	Senatus.
VIII.	1878	Mrs. Isabella Webster.	160 0 0	3	3	Two of about £60 and one of about £40	Senatus.
IX.	1878	Dr. Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr. Thomson.
X.	1879	Mrs. Barbara Mylne.	30 0 0	1	3	†750 0 0	Moderator, Procurator, and Prin. Clerk of Gen. Assem.

I. By Ordinance, No. 79, of the Scottish Universities' Commissioners, and subsequent Order of her Majesty in Council, 1868, each of the *Buchanan bursaries* is open for competition to all Masters of Arts of any of the universities of Scotland or to students who have passed the necessary examinations for the degree of M.A., but have deferred their graduation with a view to Honours, entering on their first or second session in the Faculty of Divinity in the University of Edinburgh. No person is admissible to competition who has for more than one session been a student in the Faculty of Divinity in any of the Scottish universities. Each bursar holds his bursary for three years, subject to this condition—that he shall, during that period, give regular attendance, as a student of Theology, in the University. If it appears to the Senatus Academicus desirable, for the purpose of distributing

* As nearly as the amount averages. † Interest only of this amount.

the benefits of competitive bursaries in Theology among students of different years, it is lawful, for that purpose only, to appoint a student for a shorter period. No person can hold the bursary along with any other bursary, fellowship, or scholarship in any Scottish university. II. By Ordinance, No. 80, of the Universities Commissioners, and subsequent Order in Council, the regulations for this bursary are the same as those for the Buchanan bursaries. III. By Ordinance, No. 85, of the Univ. Com., and subsequent Order in Council, the regulations for this bursary are the same as those for the Buchanan bursaries. IV. By Ordinance, No. 81, of the Univ. Com., and subsequent Order in Council, the regulations for this bursary are the same as those for the Buchanan bursaries. V. By Ordinance, No. 76, of the Universities' Commissioners, and subsequent Order in Council, each *King William bursary* is open to competition to all Masters of Arts of any of the universities of Scotland, or students who have passed the necessary examinations for the degree of M.A., and who have attended for one session, and no more, in the Faculty of Divinity in the University of Edinburgh: provided that no person shall be a competitor who has attended for one or more sessions in the Faculty of Divinity in any other of the Scottish universities. The examinations in the competition shall be conducted by the professors in the Faculty of Divinity in the University. Each bursar shall hold his bursary for two years, subject to the condition that he shall, during that period, give regular attendance as a student of Theology in the University. No person shall hold either of the bursaries along with any other bursary, fellowship, or scholarship of any Scottish university. When the two bursaries fall vacant at one time, one bursar shall be appointed for two years, and the other for one year. VI. Founded in memory of her brother, J. Ettles, Esq., of Havannah. Open to those who have passed all the examinations for M.A., and are in the first year of their Theological course. Cannot be held with any other bursaries or scholarships. VII. As in the case of the Faculty of Arts (see No. LIII.), a student from the parishes of Crawford or Leadhills is, if found duly qualified in respect of attainments, appointed to a bursary in his first year, and holds it (unless he has failed to show himself a diligent student) to the end of his Theological curriculum. Failing any student from those favoured parishes, the bursary or bursaries will be thrown open to competition, but the winner only holds his bursary for one year in each case. In the second and third years a student from Crawford or Leadhills has again a preference, but holds the bursary for one year only. VIII. Founded by Mrs. Isabella Webster, 38, Heriot Row, Edinburgh, in memory of her husband, George Webster,

Esq. There are three bursaries—two of from £52 10s. to £60, and one of them from £35 to £40, open to students of Divinity in connection with the Church of Scotland in their first year, who have successfully passed all their examinations for the degree of M.A. in any Scottish university, whether they have actually graduated or not. Each is tenable for three years. IX. For the *Thomson bursaries* application may be made to Messrs. Traquair, Dickson, and Maclaren, 11, Hill-street. Candidates of the name of Thompson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh preferred. X. *Mylne bursary*: Founded by Mrs. Barbara Macaulay or Mylne, in memory of her husband, the Rev. Andrew Mylne, minister of the parish of Dollar. There is one bursary (being the free proceeds of £750) for behoof of students for the Ministry of the Church of Scotland, of Scottish birth, tenable during the curriculum in Divinity, awarded at the end of the session, after examination (of first year's students) on the subjects taught in the Theological classes during the session. The holder not to engage in any paid work during the session. No bursary has yet been given on this foundation.

C.—Presentation bursaries, open only to graduates or students who have passed the necessary examinations for the degree of M.A., but have deferred their graduation with a view to Honours:

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
			£ s. d.			£ s. d.	
I.	1695	Robert Bayne of Pitcairley.	25 0 0	1	3	25 0 0	Society of Sons of the Clergy.
II.	1695	James Nairne.	16 13 4	1	3	16 13 4	Prof. of Divinity.

I. This formerly belonged to Ferguson of Raith, and was sold by him to the late Principal Lee; and by Principal Lee's representatives to Professor Crawford. By Ordinance, No. 71, of the Universities' Commissioners, and subsequent Order in Council, the following are the regulations as to this bursary: No person shall be presented unless he be a Master of Arts of a Scottish University. Each bursar shall hold the bursary for three years, subject to the condition that he shall, during that period, give regular attendance as a student in Theology in the University of Edinburgh. No person shall hold the bursary along with any other bursary, or with any scholarship in the University. II. *See* Ordinance, No. 67, of the Universities Commissioners, and subsequent Order in Council.

D.—Bursary gained in Faculty of Arts, the holders of which are at

liberty to study in the Faculty of Divinity: No. of foundation: 1. Year of foundation: 1871. Name of founder: the Sibbald Trustees. Total annual income: about £150. No. of bursars: 5. For years: 4. Annual allowance to each bursar: about £30. Patrons: the Trustees of Dr. J. R. Sibbald. *See* under BURSARIES IN ARTS, No LI., Sibbald Bursaries.

III.—BURSARIES IN THE FACULTY OF LAW:

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
			£ s. d.			£ s. d.	
I.	1871	The Sibbald Bursaries.	*150 0 0	5	4	30 0 0	Trustees of Dr. J. R. Sibbald.
II.	1878	The Grierson Trustees.	*80 0 0	3	1	26 13 4	Senatus.
III.	1873	The Cairns Bursary.	*19 0 0	1	1	*19 0 0	Senatus.
IV.	1878	Dr. Andrew Thomson.	100 0 0	4	4	25 0 0	Trustees of Dr. Thomson.

I. These bursaries may be held during the curriculum in Law. II. There are three *Grierson bursaries*, each of the value of £26 13s. 4d. annually. Deserving students, from the parishes of Crawford or Leadhills, applying to the Secretary of the Senatus, on or before the 22nd day of October, are entitled to preference, if they satisfy certain conditions; and if the applicant is commencing his first winter session of the Law curriculum he will be entitled to hold the bursary for three years. Failing preferential candidates the bursaries will be tenable only for one year, and will be awarded among candidates who have attended one year in the Faculty of Arts in some University, and have applied as above-mentioned to the Secretary of the Senatus. 1. In the case of candidates commencing their first winter session in Law—by competitive examination in Latin and Moral Philosophy. 2. In the case of candidates commencing their second winter session—to the most distinguished law student of that standing, who has passed satisfactorily in Latin and Moral Philosophy. 3. In the case of candidates commencing the third winter session of the Law curriculum—to the most distinguished law student of that standing who has passed satisfactorily in Latin, Moral Philosophy, and Logic. III. The candidates for the *Cairns bursary*, which is tenable only for one year, and is not subject to any preferences, are subject to the same conditions as those for the Grierson bursary. The bursary is open to students who have completed one year in the Law Faculty. IV. For

* As nearly as the amount averages.

the *Thomson bursaries* application may be made to Messrs. Traquair, Dickson, and Maclaren, 11, Hill-street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, preferred.

IV.—BURSARIES IN FACULTY OF MEDICINE.—*See* "Guide to the Medical Profession." *

University Prizes.

THE LORD RECTOR'S PRIZE.—The Lord Rector of the University has signified his intention of offering a prize of twenty-five guineas annually, during his tenure of office, for the best essay on a Historical Subject, open to be competed for by all students of the University of Edinburgh, not being Masters of Arts of more than two years' standing. Essays in competition should be sent in to the Principal of the University on or before the 1st November. Each essay must be sent anonymously, distinguished by a motto, and accompanied by a sealed cover, with the motto written on the outside, and containing the name and address of the author, and a statement of his University standing.

1. FACULTY OF ARTS.—I.—*Bruce of Grangehill and Falkland's Prize in the Class of Logic and Metaphysics.*—This prize of £20, awarded to the most distinguished student in this class, "on such conditions and competition as the professor may direct, and on his decision," for excellence in the study of Logic and Metaphysics, was founded in 1865, by Mrs. Tyndall Bruce of Grangehill and Falkland, in commemoration of John Bruce, Professor of Logic and Metaphysics in the University, 1774-1786.

II.—*Gray Prizes.*—The Gray Prize Essay Fund was instituted in 1860, in terms of the will of Simon Gray, Esq., of Mornington-crescent, London. It is under the management of Five Trustees, of whom W. Ritchie, D.D. of Dunse is the Secretary.

III.—*Neil Arnott Prize for Experimental Physics.* — This prize consists of the annual proceeds of a sum of £1,000 presented to the University by Dr. Neil Arnott of London. It is awarded to the candidate who shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. Candidates must have been medical students of this University during either a summer or a winter session; and the successful candidate must continue a medical student at this University during the next winter session, failing which, the prize is to be forfeited and assigned to the

* A "Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

competitor next in merit. No student can appear for examination after the completion of his third *annus medicus*; no candidate shall be allowed to offer himself more than once. In the event of a competitor qualified as above not coming forward, the prize will be awarded to a candidate for a degree in Arts who shall pass with most distinction the ordinary examination in Natural Philosophy.

IV.—*Dr. Muir's Prizes in Sanskrit and Comparative Philology.*—At the end of the winter session two prizes of £10 and £5 respectively will be offered for competition to students who have attended one of the Sanskrit Classes. The highest prize will be awarded to the best *second* year's student, and the lower prize to the best *first* year's student. No distribution of prizes will take place if the competitors fail to show a satisfactory knowledge of the subjects taught in the Sanskrit Classes, and the right to award both or either of the prizes is reserved for the decision of the Professor. Dr. Muir also offers the sum of £5 for distribution in books to those students who show the most satisfactory knowledge of the subjects taught in the class of Comparative Philology.

V.—*Dr. Muir's Prize for Graduation in Philology.*—In 1872-3 Dr. Muir offered a prize of £100 to the most distinguished candidate who should first take the degree of D.Sc. in the department of Sanskrit and Comparative Philology. The prize, however, although open for five years, not having been taken by the end of the session 1876-7, it has been renewed for another five years. For subjects, *see* under "Graduation in Science," Section E.

VI.—*Scott and Dunbar Prize for Greek.*

VII.—*Cousin Prize.*—This prize, founded in connection with the Class of Fine Art through a bequest by the late David Cousin, Esq., is of the annual value of about £18, and will be awarded at the close of each session for proficiency in Class Essays set from time to time by the Professor.

2.—FACULTY OF DIVINITY.—*Barty Memorial Prize.*—The Barty Memorial prize of £25, for scholarship in Hebrew and Hellenistic Greek, is open to entrants to the Divinity Halls of the four Scottish Universities.

3.—FACULTY OF LAW.—*The Forensic Prize* is awarded annually to the candidate who shall pass with the greatest distinction the examination in the subjects for a degree in Law.

4.—FACULTY OF MEDICINE.—*See* "Guide to Medical Profession."

University Scholarships.

FACULTY OF ARTS.—I.—*The Pitt Club Classical Scholarship.*—The Pitt Club scholarship consists of the annual proceeds of a sum of

£1500, tenable for not more than four years. It is under the management of the Senatus Academicus. By Ordinance No. 17 of the Scottish Universities Commissioners it is open for competition to all who have passed regularly through the Course in Arts in the University, and have been admitted to the degree of M.A. in Edinburgh, at any time within four years before the competition takes place. The subjects embraced in the examination are Classics and English Literature.

II.—*Mackenzie Classical Scholarship.*—This scholarship was founded in 1862, by James Mackenzie, Esq., W.S., and is of the annual value of about £120, tenable for not more than four years. It is under the management of the Senatus Academicus. By Ordinance No. 90 of the Scottish Universities Commissioners, it is open for competition to all graduates in Arts in the University of Edinburgh of not more than three years' standing at the time of the competition. Candidates are examined in Classical Literature and in English Literature, and the examination is conducted by three or more examiners selected by the Senatus from their own body. It cannot be held along with any other scholarship, fellowship, or bursary, of any Scottish university. The examinations will include: 1. Translations from Latin and Greek authors; 2. Composition in Latin and Greek Prose; 3. Latin and Greek Literature and History; 4. English Essay-writing; 5. History of English Literature.

III.—*Baxter Mathematical Scholarship.*—This scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1863. It consists of one-half of the annual proceeds of a sum of £3200, tenable for not more than four years. By the terms of the deed of foundation (given in the "Calendar" for 1864-5, p. 171) it is to be awarded for proficiency in the department of Mathematics, particularly in that branch of it which includes Mechanical and Physical Science. Competitors must be graduates in Arts of the University of Edinburgh, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mathematics.

IV.—*Baxter Philosophical Scholarship.*—This scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1863. It consists of one-half of the annual proceeds of a sum of £3200, tenable for not more than four years. By the terms of the deed of foundation (given in the "Calendar" for 1864-5, p. 171), it is to be awarded for proficiency in the department of Mental Philosophy. Competitors must be graduates of Arts in the University of Edinburgh, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mental Philosophy. The subjects of examination are Logic, Metaphysics, and Moral Philosophy.

V.—*Baxter Physical Science Scholarship.*—This scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865. It consists of one-half of the annual proceeds of a sum of £3500, tenable for two years. By the terms of the deed of foundation, it is to be awarded to the most eminent of the Bachelors in Science who have passed their examinations in the Physical Sciences, including Experimental Philosophy and Chemistry, either in the year preceding a vacancy, or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this scholarship is subject to the condition that the holder shall have taken the degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other scholarship, fellowship, or bursary, or with any situation yielding an annual income of £100.

VI.—*Baxter Natural Science Scholarship.*—This scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865. It consists of one-half of the annual proceeds of a sum of £3500, tenable for two years. By the terms of the deed of foundation (given in the "Calendar" for 1866-67, p. 203), it is to be awarded to the most eminent of the Bachelors in Science who have passed their examinations in the Department of the Natural Sciences, including Botany, Zoology, Physiology, and Geology, either in the year preceding a vacancy or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this scholarship is subject to the condition that the holder shall have taken the degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other scholarship, fellowship, or bursary, or with any situation yielding an annual income of £100.

VII.-X.—*John Edward Baxter Scholarships.*—These scholarships were founded in 1876, and are three in number, each consisting of the annual proceeds of a sum of £2500. They are in the departments of Mathematics, Classical Literature, and Mental Philosophy.

X.—*Drummond Mathematical Scholarship.*—This scholarship was founded in 1865 by Miss Elizabeth Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland. It consists of the annual proceeds of a sum of £2650, and is tenable for three years. By the deed of foundation (given at p. 198 of "Calendar" for 1865-6), it is open to graduates in Arts of not more than three years' standing, who shall have graduated with Honours in the department of Mathematics. It is not to be held with any other bursary or scholarship, and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical

application of Mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures examined by him, and the Mathematical principles exemplified thereby; which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh.

XI.—*Bruce of Grangehill and Falkland's Classical Scholarship.*—This scholarship was founded in 1865 by Mrs. Tyndall Bruce of Falkland, and is of the annual value of £100, tenable for three years, during two of which the studies of the scholar must be prosecuted in the University of Edinburgh, but in the third year they may be prosecuted in an English or foreign university. By the terms of the deed of foundation (given at p. 205 of the "Calendar" for 1866-7), it is open to students who have passed their examinations for the degree of Master of Arts, with Honours, and is conferred upon the most distinguished of these in the year and department in which it is open. The scholarship cannot be conferred upon anyone whose age exceeds twenty-three years. It cannot be held with any other scholarship or fellowship of a Scottish University, or with any situation yielding an income of £100 per annum.

XII.—*Bruce of Grangehill and Falkland's Scholarship in Mental Philosophy.*—This scholarship was founded in 1865 by Mrs. Tyndall Bruce of Falkland, and is of the value of £100. It is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Logic, Metaphysics, and Moral Philosophy.

XIII.—*Bruce of Grangehill and Falkland's Mathematical Scholarship.*—This scholarship was founded in 1865 by Mrs. Tyndall Bruce of Falkland, and is of the value of £100. It is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Mathematics and Natural Philosophy.

XIV.-XV.—*Gray Scholarships.*—These two scholarships, founded by Mr. Gray, of Baad Park, in 1864, consist each of the annual proceeds of a sum of £1000, tenable for a period not exceeding two years. All candidates must pass the examination for the degree of Master of Arts. In making appointments the Senatus are directed to prefer in the first place candidates of the name of Gray; secondly, such as are born in the parishes of Midcalder or Kirknewton. Failing well qualified candidates who fulfil these conditions, the scholarships are awarded to the most distinguished candidates for the degree in Arts, alternating amongst the Honours departments. The holders must proceed to study in one of the Faculties of Theology, Law, or Medicine.

XVI.—*Gilchrist Scholarships.*—These scholarships were founded in

1865 by the Trustees of the late Dr. Gilchrist; they are three in number, each of the annual value of £100, and are open to natives of India who have passed competitive examinations at the Presidential Colleges of India. They are attached to the Medical, Law, and Literary Classes in the University.

XVII.-XIX. — *Miss Baxter of Balgavies' Scholarships.* — These scholarships were instituted in 1868 and 1878 by Miss Mary Baxter of Balgavie. They are three in number, two of the annual value of £40, the third of £20. They are in the gift of the Directors of the High School of Dundee. They are open for competition to all pupils who shall have finished their course within one year at the High School of Dundee. The examination is held at Dundee by examiners appointed by the Directors, and the subjects are Geometry, Algebra, Trigonometry, and Mechanical Drawing. They are tenable for one year certain, and for a second if a favourable certificate is sent to the Directors by the Senatus Academicus. The classes to be attended the first year are Mathematics, Natural Philosophy, and Engineering; the second year Chemistry, Engineering, and the second course of Natural Philosophy. In the event of a degree in Engineering being established, the holder of any of these scholarships taking that degree at the end of his two years' course is entitled to a gratuity of £10 10s. These scholarships are not to be held with any other scholarship, fellowship, or appointment yielding £50 per annum.

XX.-XXI.—*Fettes Exhibitions.*—These exhibitions are each of the annual value of £60. They are tenable for four years, open annually for competition, one among the foundationers alone; and the other among the foundationers and such of the other pupils as have attended the Fettes College regularly for not less than four years. The first appointments were made in 1875.

XXII.-XXIII.—*Rhind Scholarships.*—These scholarships were in accordance with the will of the late A. H. Rhind, Esq., of Sibster, founded by his trustees on the reversion of his estate. They are two in number, each consisting of the annual proceeds of a sum of £2400, tenable for two years, with the possibility of a prolongation of the tenure at the end of that period. The first is in the department of Classical Literature, the second in that of Philosophy. Candidates who are undergraduates must have completed at least three sessions in the regular curriculum in Arts, and have obtained at least two departmental certificates; and candidates who are graduates must have received the degree of Master of Arts in this University within two years of the date of the competition. The successful candidates may be required to undertake duties connected with the teaching of the

University, or otherwise assist in some department of its operations in terms of the trust deed.

XXIV. *Scholarships in Music.*—By the will of Signor Theophile Bucher, who died in 1871, his trustees are enjoined (on the death of an annuitant), to pay over the residue of his estate, amounting to about £3000, to the Senatus and Curators of the University for the purpose of founding one or more scholarships of Music to be held by any young men born in Scotland who may shew a natural talent for music and wish to make it their profession, for the purpose of improving their education, and enabling them to prosecute the study of the science and art of music in Italy, Germany, and France. When the funds become available, regulations for the scholarships will be framed by the Curators and Senatus.

XXV.—*The Charles MacLaren Scholarship.*—This scholarship was founded in 1871 by the trustees of Mrs. Maclaren, in memory of Charles Maclaren, Esq., the eminent geologist. It consists of the proceeds of a capital sum of £2600. It is for the encouragement of the study of Mathematics and Natural Philosophy, and is open to all graduates in Arts of not more than three years' standing at the time of the competition (and under thirty years of age) who shall have taken honours in Mathematics. It is tenable for three years. The successful competitors are to spend a few months in travelling and in examining remarkable Engineering and Architectural Structures, and to report to the Senatus, which report the Senatus may cause to be publicly read in the University.

XXVI.—*Neil Arnott Scholarship for Experimental Physics.*—This scholarship was founded in 1874, and is awarded annually to the most distinguished student in the Physical Laboratory of the University. It consists of the annual proceeds of a sum of about £1000. The recipient must, during the ensuing summer and winter sessions assist the Professor of Natural Philosophy in the Laboratory. Failing a student deemed by the professor worthy of the scholarship, it may be given to the candidate for a degree in Arts who has undergone the examination in Natural Philosophy with most distinction.

XXVII.-XXIX. *Ferguson Scholarships.* — *Founded* 1860. — The scholarships, of £80 each per annum, are tenable for two years, subject to fulfilment of the following Rule of the Trustees:

> Persons gaining the scholarships will, during the tenure thereof, be expected to prosecute studies in furtherance of the higher learning; and those who have not graduated shall be required to do so before the last payment is made. Any case of conduct unbecoming a scholar and a gentleman shall incur forfeiture of the scholarship, of which the Trustees shall be sole judges.

Certificates will be granted to such of the unsuccessful competitors as, in the opinion of the examiners, shall have taken a distinguished position in the examinations.

XXX.-XXXV.—*Vans Dunlop Scholarships.*—Six *Vans Dunlop scholarships*, each of the annual value of about £100, and tenable for three years, are now founded in the Faculty of Arts. By the deed of foundation these are appropriated to the five following subjects: 1. English Literature and Poetry; 2. Classical Learning—Latin and Greek; 3. Engineering and the Mechanical and Useful Arts; 4. Commercial and Political Economy and Mercantile Law; 5. Logic and Metaphysics; 6. Natural Philosophy. In terms of the trust disposition, they are given only for "distinguished proficiency" in the various subjects of competition, as determined by the examiners and the Senatus Academicus. Not more than one of the Vans Dunlop scholarships can be held by the same person, and Vans Dunlop scholars cannot hold any other scholarship or bursary in the University of Edinburgh. The following are the *General Regulations for the Examinations*: I. *English Literature and Poetry*: Candidates are subjected to an examination testing—(1) Knowledge of the History of English Literature generally, and more particularly through a prescribed period; (2) Acquaintance with certain books, chiefly of English Poetry, prescribed for special reading; (3) Ability in English Composition, in the form of an Essay, written in the Examination Room, on some subject of literary criticism. The competition is open to all matriculated students in the second, the third, or the fourth year of their matriculation, who have given regular attendance in the class of Rhetoric and English Literature. The Professor of Rhetoric and English Literature, and an examiner appointed by the Senatus are the examiners. II. *Classical Learning—Latin and Greek*: (1) *Latin*—The examination will test: (*a*) Knowledge of Latin books and special subjects previously prescribed. (*b*) Power of Latin Composition, and of translating from Latin authors not previously prescribed. (2) *Greek*—(*a*) Knowledge of Greek books previously prescribed. (*b*) Power of Greek Composition, and of translating from Greek authors not prescribed. (*c*) Knowledge of Greek History and Literature. The competition is open to matriculated students in their second, third, or fourth session who have completed attendance in the Latin and Greek classes necessary for graduation in Arts. Any one who in the previous April may have completed his course for graduation in Arts in three sessions may take part in the competition, although not actually a student in the session during which the examination takes place. The Professors of Humanity and Greek are the examiners. III. *Engineering and Mechanical and Useful Arts*:

The examination shall be similar to that for the Second B.Sc. examination for the degree in Engineering, with the addition of questions on prescribed books treating of Engineering and Mechanical and Useful Arts. The competition shall be open to all matriculated students who have been in regular attendance on the class of Engineering for at least two winter sessions, and who have not been students of the University for more than four years. The examiners are the professors of Engineering and Natural Philosophy. IV. *Commercial and Political Economy and Mercantile Law*: (*a*) Candidates are subject to an examination testing their knowledge (1) of Commercial and Political Economy, and (2) of Mercantile Law—two papers on the former and one on the latter. (*b*) The competition is open to all who have been matriculated students for not less than two years, who have not discontinued attendance at the University for more than one year, who have regularly attended the class of Commercial and Political Economy and Mercantile Law, and who at the time of the competition are matriculated students. (*c*) The Professor of Political Economy and an examiner nominated by the Senatus are the examiners. V. *Logic and Metaphysics*: The examination will test knowledge of (*a*) Psychology, (*b*) Logic, (*c*) Metaphysics and the History of Philosophy. It will include the subjects embraced in the lectures on each of these branches; also prescribed reading and studies of special subjects. The competition is open to all who have been matriculated students for not less than two nor more than six years, who have not discontinued attendance at the University for more than one year, who have regularly attended the junior and advanced classes of Logic and Metaphysics, and who at the time of the competition are matriculated students. The Professor of Logic and Metaphysics and the Professor of Moral Philosophy are the examiners. VI. *Natural Philosophy*: The examination will test the knowledge of the candidates in Experimental Physics and Applied Mathematics. The competition is restricted to matriculated students who have passed at least two and not more than six sessions at the University, and who have attended the classes of Natural Philosophy. The Professors of Natural Philosophy and Mathematics are the examiners. No one is considered a "matriculated student" in the competitions for Vans Dunlop scholarships unless he has regularly attended in at least one class in the University of Edinburgh during each winter session in which he claims to have been a matriculated student. Each scholarship is tenable on condition that the scholar submits annually to the University evidence that he is prosecuting his studies, or his professional work, in a manner satisfactory to the Senatus. The evidence may consist of—(1) Certificates of attendance

on lectures or laboratories in this or some other university; or (2) Certificate of having acted as assistant to a professor in this or some other university; or (3) a written report of work done by the scholar during the year, together with a thesis composed by himself on a subject connected with that work.

XXXVI.—*The Skirving Scholarship for Moral Philosophy.*—This scholarship is to be founded in accordance with the will of the late David Skirving, of No. 13, Westbourne-park, London. It will be of the annual value of about £50, and tenable for three years.

XXXVII.—*The Lang Scholarships.*—This is a bequest by the late John Lang, Esq., of Warren Park, Ayrshire, with the object of founding four scholarships, to be called the "Lang Scholarships," one in Natural Philosophy, one in Mathematics, one in Chemistry, and one in Botany. The capital sum will be payable on the death of the survivor of two liferenters.

FACULTY OF DIVINITY.*—I.—*Pitt Club Divinity Scholarship.*—This scholarship was instituted in 1862 by the Pitt Club, and consists of the annual proceeds of a sum of about £2900, tenable for three years. By Ordinance No. 77 of the Universities Commissioners, this scholarship is open to competition to all Masters of Arts of any of the Universities of Scotland who have given regular attendance in the Faculty of Divinity in the University of Edinburgh for three complete sessions, and who are in the course of studying with the view of becoming clergymen of the Church of Scotland. No person is admissible who has been entered as a student of Divinity more than six years prior to the time of the competition. Candidates are to be examined on (1) The Evidences of Revealed Religion; (2) Systematic Theology; (3) Hebrew; (4) Church History; (5) Biblical Criticism. It cannot be held with any other scholarship, fellowship, or bursary of any Scottish University, or along with any parochial or pastoral charge, whether as minister or assistant.

II.—*Maxton Divinity Scholarship.*—This scholarship was founded by the Trustees of the late John Maxton, Esq., in 1867, and is of the annual value of about £40, tenable for three years. It is open only to students who are members of the Established Church of Scotland, and

* It has been agreed by the Senatus and the Faculty of Divinity, in regard to the Fellowships and Scholarships of the funds of which they are severally the administrators, that

1. The *Pitt Theological Scholarship* (free proceeds of £2900) shall be competed for when it falls vacant

2. The *Aitken Theological Scholarship* (£80 or £90) shall be reserved from competition when it falls vacant in the same year with the Pitt.

3. The *Glover Divinity Scholarship* (£35) shall (according to its conditions) not be open to competition when the Pitt or Maxton may be open, and shall be similarly reserved when the Aitken is open.

4. That meanwhile the *Maxton* (about £40) be competed for when it is vacant.

who have completed the course of study in the Faculty of Divinity in the University of Edinburgh.

III.—*The Glover Divinity Scholarship.*—This scholarship was founded in 1875 by subscribers to a fund for celebrating the memory of the Rev. W. Glover, D.D., and the University Endowment Association. It consists of the annual proceeds of a sum of about £800, tenable for three years, and open to all Masters of Arts of any of the universities of Scotland who have finished their study of Theology, before entering the Church of Scotland, within six years, and who have attended the last session of their course at least in the University of Edinburgh. It cannot be held with any other Divinity scholarship or bursary in any Scottish university, and it is not offered for competition in any year in which there is a vacancy in the Pitt Divinity scholarship, or the Maxton Divinity scholarship.

IV.—*The Aitken Theological Scholarship.*—This scholarship, founded in 1875 by bequest of the Rev. David Aitken, D.D., formerly minister of Minto, consists of the proceeds of £2500. Its purpose is to make provision for the study of Church History and Biblical Criticism at one or more University seats in Germany, or elsewhere on the Continent of Europe, in the case of meritorious students at Edinburgh university. It is to be awarded, after competitive examination, to a student in Divinity of the University of Edingurgh, who is a graduate in Arts of that University of not more than four years' standing. It is tenable for two years; but the Senatus may extend the term for another year if it appear to them desirable. The time of the competition to be fixed and publicly intimated by the Senatus at least three months before; and the Senatus are also at liberty to prescribe whether one or more semesters in the foreign university shall be attended in each year. It is not offered for competition in the same year as the Pitt Divinity scholarship or the Glover Divinity scholarship.

V.—*The David Kidd Scholarship.*—This scholarship, which consists of the annual proceeds of about £1000, is to be awarded, after competitive examination in Theology, to students of any of the universities of Scotland, natives of Scotland, who have finished their course of study with the view of becoming Ministers of the Church of Scotland.

VI.—*Gunning Scholarships.*—These scholarships, founded by Dr. Gunning, of Rio de Janeiro, are three in number, of the annual value of £50, £30, and £20 respectively, open to students of the Church of Scotland and Free Church of Scotland, tenable for three years. The examination is on Natural History, Botany, and Geology, and some department of Natural Theology or Christian Apologetics. They are

open to students beginning their Theological course after a course of not less than three years in the Faculty of Arts in a Scottish University. First appointments were made in May 1880.

FACULTY OF LAW.—*Vans Dunlop Scholarship in Oriental Languages and Comparative Philology.*—Annual value £100, tenable for three years.

FACULTY OF MEDICINE.—I.—*Ettles Medical Scholarship.*—This scholarship was founded in 1868 by Miss Mary Ettles of Inverness, and consists of the free annual proceeds of the sum of £1000 mortified for the purpose. It is to be awarded annually to the graduate in Medicine of the University of Edinburgh whom the Medical Faculty may consider the most distinguished of that year.

II.—*Sibbald Medical Scholarship.*—This scholarship is of the annual value of £40. *First*, the scholarship shall be bestowed on, and held by, a student of the Medical Faculty in the University of Edinburgh *who does not hold any other scholarship or bursary*, and shall be tenable for three years, during which period the scholar shall complete the prescribed course of medical study required from candidates for the degree of Bachelor of Medicine. *Second*, the scholarship shall be bestowed upon the student obtaining the highest place by competitive examination, and shall be open to all candidates who have not previously been students of Medicine in any other school or university, and who have attended Medical Classes in the University of Edinburgh, for *not less* than one winter and one summer session, and for *not more* than one winter and two summer sessions. The competitive examination shall be in Chemistry, Botany, and Natural History, and shall be conducted annually about the commencement of each winter session, in such manner as the Senatus Academicus shall, in concurrence with the Trustees, prescribe. *Third*, Every candidate shall, along with his application to the Trustees, lodge a certificate by a professor of the University of Edinburgh, or by a householder in Edinburgh, to the effect that he is a person of respectability and good conduct. *Fourth*, In the event of the scholar being expelled or rusticated from the University, he shall *ipso facto* forfeit his scholarship during the remainder of its currency. *Fifth*, It shall be in the power of the Trustees at any time, on a report from the Principal of the University for the time being of misconduct on the part of the holder, to declare the scholarship forfeited, or to suspend the same for such period as they may think proper. *Sixth*, The scholarship shall be payable in two equal portions, one half on 1st May, and the other half on 1st August—beginning the payment of the first half of each year's scholarship on 1st May, at the close of the first winter session, and the payment of

the second half on 1st August thereafter—and so on during the currency of the scholarship; and the scholar, in order to entitle him to receive payment, shall produce to the Trustees or to their factors and cashiers, the tickets for, and certificates of regular attendance at, the classes which he has attended during the previous session; and the scholar shall in each year complete an *annus medicus* in the University of Edinburgh. Application to be made to Messrs. Mackenzie, Innes, and Logan, W.S., 23, Queen Street, Edinburgh.

III.—*Thomson Scholarship.*—The Thomson scholarship, value £40, is tenable for four years. A preference is given to candidates of the names of Thomson or Traquair, or natives of the town or county of Dumfries, or of the City of Edinburgh. For subjects of examination and other particulars, application may be made to Messrs Traquair, Dickson, and Maclaren, W. S., 11, Hill Street, Edinburgh.

IV.—*Coldstream Memorial Medical Missionary Scholarship.*—The Coldstream Memorial Medical Missionary scholarship was founded in memory of the deceased John Coldstream, M.D., F.R.C.P.E. Value £25, tenable for four years. The holder must be a first year's medical student, who intends to devote himself to the life of a medical missionary at home or abroad. He must be approved of by the awarders, and pass the Preliminary examination before beginning his studies. It was to fall vacant in 1883. A preference is given to students connected with the Edinburgh Medical Missionary Society. A full copy of the conditions can be had on applying to John P. Coldstream, W.S., 5, East Castle Road, Merchiston, Edinburgh.

V.—*Hope Prize Scholarship.*—Value about £30 (award in March, 1883), to the most distinguished junior student in the Chemical Laboratory during the winter session.

VI.-XI.—*The Vans Dunlop Scholarships.*—Six scholarships, each of the value of about £100, and tenable for three years. Not more than one of these scholarships at a time to be held by the same person. *One* to be awarded to the Medical student who shall, at either the March or the preceding October Preliminary examination, have obtained the highest total number of marks in the subjects required to enable him to appear for a Professional examination. The successful candidate will be required to pursue his Medical studies in the University of Edinburgh during his tenure of the scholarship (an award in March, 1884). *One* to be awarded for subjects of First year's study, viz., Botany, Zoology, Chemistry, and Anatomy, to the student who, having attended, for the first time, a systematic course of lectures on each of the above subjects during the preceding winter session, and

also during either the preceding or current summer session, shall obtain the highest number of marks collectively in the University Class examinations in those subjects; provided that he has gained not less than 60 per cent. of the marks in each of the subjects. The successful candidate to continue his medical studies in the University during his tenure of the scholarship (an award in July, 1884). *One* to be awarded for subjects of Second year's study, viz., Physiology and Surgery, to the student who, during the winter session, shall have attended, for the first time, a systematic course of lectures on each of these subjects, and who shall have obtained the highest collective number of marks in the Class examinations; provided that he has gained not less than 60 per cent. of the marks in each of the two subjects. The successful candidate to continue his medical studies in the University during at least two years of his tenure of the scholarship, whilst the remaining year must be passed in study, either in this University, or in some other school of Medicine to be approved by the Faculty of Medicine (an award in March, 1884). *Three* to be awarded at the end of the third winter of study of subjects in the Medical Curriculum, of which one shall be given in each year to the student who, after having attended within the University the subjects of examination, shall obtain the highest number of marks in an examination, especially conducted for the purpose, on Anatomy, Physiology, Materia Medica, and Pathology. The successful candidate to continue, for at least the first year of his tenure of these scholarships, his medical studies in this University, and during the remaining period to prosecute research in some branch of study comprised in the Medical Curriculum, and approved of by the Faculty of Medicine. One of these scholarships to be awarded annually in April.

XII.—*Buchanan Scholarship.*—This consists of the interest of £1000, and is awarded yearly on the day of medical graduation for proficiency in Midwifery and Gynæcology.

XIII.—*Stark Scholarship* (*Medicine*).

VANS DUNLOP SCHOLARSHIPS IN SCIENCE.—I.—*Chemistry and Chemical Pharmacy.*—(1) The subjects of examination shall be—(*a*). Inorganic and Organic Chemistry, and the connection between the Chemical and Physical character of Substances; (*b*) Qualitative and Simple Quantitative Analysis of Inorganic Substances, and the Preparation and Testing of the Chemical Substances in the British Pharmacopœia. (2) The examination in subjects (*a*) shall be similar, and held at the same time, as that for the Second B.Sc. examination. The examination in subjects (*b*) shall be conducted practically in the

Laboratory. (3) The competition shall be open to all students of the University, from the second to the sixth year (inclusive) of their attendance.

II.—*Natural History, including Geology and Botany.*—(1) The subjects Natural History, Geology, and Botany are co-equal in the examination, and the examination in each of the three subjects shall be similar to that for the Second B.Sc. examination, and shall consist of two parts—a written examination extending over not less than three hours, and a practical examination with specimens. (2) The examination will be held in April, at the same time as the Second B.Sc. examination. (3) The competition shall be open to all students of the University, from the second to the sixth year (inclusive) of their attendance. These scholarships shall be tenable for three years, on condition that the scholar submits annually—(1) A certificate of attendance on lectures or laboratories approved by the Senatus; or (2) a certificate of having acted as an assistant to a professor in this or some other University; or (3) a written report of his work done during the year, together with a thesis composed by himself in connection with some part of that work. The examiners shall be the professors in the different subjects.

University Fellowships.

FACULTY OF ARTS.—I.—*Guthrie Fellowship in Classical Literature.*—This consists of the annual proceeds of a sum of £2500, tenable for four years, and is for proficiency in Classical Literature. It is tenable by graduates in Arts of the University who may have taken their degree since the period of the last competition. Students, however, who have passed their examination for a degree since the last competition, but deferred graduating for the sake of obtaining Honours, are also eligible. It cannot be held along with any other fellowship or scholarship in any Scottish university in the same department.

II.—*Hamilton Fellowship in Mental Philosophy.*—This fellowship was founded in 1866 by the subscribers to the fund for a memorial to the late Professor Sir William Hamilton, and by the Association for the better endowment of the University. It consists of the annual proceeds of a sum of £2600, tenable for three years, and is open to all graduates in Arts in the University of Edinburgh of not more than three years' standing at the time of the competition. It cannot be held along with any other scholarship or fellowship in a Scottish university. The subjects of examination are Logic, Metaphysics, Moral Philosophy, and the History of Philosophy.

III.—*Shaw Fellowship in Mental Philosophy.*—This fellowship was founded in 1867. It consists of the annual proceeds of a sum of £4300,

tenable for a period not exceeding five years, and is in the patronage of the Senatus Academicus of the University of Edinburgh. It is designed for the encouragement of the study of Logic, Metaphysics, including Psychology, Moral Philosophy, and the History of Philosophy, and is awarded after competitive examination on these subjects. It is open to graduates in Arts of any of the four Scottish universities, of not more than five years' standing at the time of the competition, and is tenable for five years. It is not to be held along with any other fellowship, scholarship, or bursary in any Scottish university, and it will not be open to the competition of any person who already holds a fellowship in any English or Irish university, though the holder of the Shaw fellowship will not be precluded from afterwards obtaining an English or Irish fellowship. The first series of the Shaw Lectures was delivered in 1873 by the Rev. Professor Lindsay, on "William of Occam, and his position in Mediæval Philosophy;" the second series, "On the Philosophy of Kant," was delivered by Professor Adamson in December, 1878.

IV.—*Fettes Fellowships.*—These fellowships, to be instituted by the Fettes Trustees, are two in number, each of the annual value of £100. They are to be held by graduates in Arts of the University, who have been educated for four years at least at the Fettes College.

V.—*The Falconer Memorial Fellowship.*—This fellowship was founded in 1869 by the subscribers to the Fund for a memorial to Dr. Hugh Falconer, M.D. (for many years Superintendent of the H. E. I. Company's Botanic Gardens at Suharunpoor and Calcutta), and the Association for the better Endowment of the University of Edinburgh. It is of the annual value of about £108; and is for the encouragement of the study of Palæontology and Geology. It is tenable for two years, but if the Senatus see fit, it may be held for three years, and with consent of the University Court, for four years, and is awarded after competitive examination in Natural History as applied to Palæontology and Geology. It is open to graduates in Science or Medicine of this University of not more than three years' standing at the time of the competition. It cannot be held along with any other fellowship, scholarship, or bursary in any Scottish university.

VI.-X.—*Elective Fellowships for the Encouragement of Study and Research (the gift of an anonymous donor).*—Five fellowships, of the value of £100 each, for one year, but renewable for one or two further years at the pleasure of the Senatus Academicus. There will be no examinations for election to these fellowships, but fellows will be elected by the Senatus Academicus after consideration of the qualifica-

tions and circumstances of the applicants. These fellowships are open to any graduate of a Scottish university, not being more than thirty years of age at the date of application, and provided that he be not an assistant to any professor, or an examiner in any department. The fellowships are intended for persons having attained some proficiency in, and who are desirous to prosecute, unprofessional study and research in one of the following subjects: (1) Mathematics (pure or applied) or Experimental Physics; (2) Chemistry; (3) Biology; (4) Mental Philosophy; (5) History, or the History of Literature. Within a year after his election, each fellow will be expected to give evidence of his progress, by the preparation of a Thesis, the completion of a Research, the delivery of a Lecture, or in some other way approved by the Senatus Academicus.

FACULTY OF DIVINITY.—*The Gunning Fellowship.*—This fellowship, founded by Dr. Gunning of Rio de Janeiro, is of the annual value of £100, tenable for three years, open to students of the Church of Scotland or Free Church of Scotland, who have completed a three years' course of Theological study. It is to be awarded after a Senior examination in Natural History, Botany and Geology, and in Theology by two examiners appointed by the Faculty of Divinity, one of whom may be belonging to the Faculty. Each holder, at the end of his three years' tenure, to produce a dissertation, or deliver some lectures on some subject relative to the connection between the Scriptures and the Natural Sciences.

FACULTY OF LAW.—*Edinburgh University Endowment Association Law Fellowship.*—This fellowship, of the value of £100, tenable for three years, is open to Bachelors of Laws (LL.B.) and Bachelors of Law (B.L.) of the University of Edinburgh of not more than five years' standing at the time of the competition. It was awarded in 1879.

FACULTY OF MEDICINE.—I. *The Syme Surgical Fellowship.*—This fellowship, which consists of the annual proceeds of a sum of £2850, and is tenable for two years, is open to competition among Bachelors of Medicine of not more than three years' standing who shall present the best thesis on a Surgical subject giving evidence of original research, whether such thesis be given in for graduation or otherwise.

II. *The Leckie-Mactier Fellowship.*—The Leckie-Mactier fellowship, consisting of the interest of £2000, is awarded to Bachelors of Medicine of not more than three years' standing. It is tenable for three years. The examinations comprise written reports and commentaries on medical, surgical, and gynecological cases in the University wards in the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also oral examinations in Medicine,

Surgery, Midwifery, Medical Jurisprudence, and Public Health. Every holder of the fellowship must, before the expiry of his tenure, transmit to, and if required read publicly in presence of the Medical Faculty, a communication embodying the result of original observation or historical research in some department of Medicine.

III. *The Swiney Lectureship on Geology.*—This lectureship—candidates for which must have taken the degree of Doctôr of Medicine at the University of Edinburgh—is in the patronage of the Trustees of the British Museum, and is of the annual value of £144. The office is tenable for five years, at the expiration of which period the lecturer is ineligible for the next election. The number of lectures is not to be less than twelve in each year, nor more than three in the same week. A course was delivered at Edinburgh, July, 1868. Each course must be delivered between the 1st of November and the end of July following, at such public places in the United Kingdom as the Trustees shall approve of. The public are to be admitted without fee. The lecturer will be required at the termination of each course to deposit a copy, or full extract of such course of lectures, with the Principal Librarian of the British Museum, to whom application may be made for further particulars.

THE JOHN WELSH BURSARIES.—The following document relates to these:

I, THOMAS CARLYLE, residing at Chelsea, presently Rector of the University of Edinburgh, from the love, favour, and affection which I bear to that University, and from my interest in the advancement of education in my native Scotland as elsewhere; for these, and for other more peculiar reasons, which also I wish to put on record, do intend, and am now in the act of making, to the said University, bequest as underwritten, of the estate of Craigenputtock, which is now my property. Craigenputtock, or, for distinction, Upper Craigenputtock (a wing of it having been sold some seventy or eighty years ago which is now called Under Craigenputtock) lies at the head of the parish of Dunscore, in Nithsdale, Dumfriesshire; extent is of about eight hundred acres—improved moor pastures, do. arable ground, do. meadow pasture, with rather copious plantations, solid enough mansion and offices; rental at present (on lease of nineteen years) is two hundred and fifty pounds; annual worth, with improvements now in progress, is probably three hundred pounds. Craigenputtock was for many generations the patrimony of a family named Welsh—the eldest son usually a "John Welsh"—in series going back, think some, to the famous John Welsh, son-in-law of the Reformer Knox. The last male heir of this family was John Welsh, Esquire, surgeon, Haddington (born at Craigenputtock in seventeen hundred and seventy-five, died at Haddington in eighteen hundred and nineteen, a highly honoured, widely regretted man, and is buried in the Abbey Kirk of that town); his one child, and heiress, was my late dear,

magnanimous, much-loving, and to me inestimable wife; in memory of whom, and of her constant nobleness and piety towards him and towards me, I now, she having been the last of her kindred, am about to bequeath to Edinburgh University, with whatever piety is in me, this Craigenputtock which was theirs and hers, on the terms, and for the purposes, and under the conditions underwritten. Therefore I do mortify and dispone to and in favour of the said University of Edinburgh, and of the Principal and whole other members of the Senatus Academicus thereof, and of their successors in offices for behoof of the said University, for the foundation and endowment of ten equal bursaries, to be called the "John Welsh Bursaries," in the said University, heritably and irredeemably, all and whole the twenty-shilling lands of Upper Craigenputtock, with houses, biggings, yeards, orchyeards, mosses, moors, meadows, outfield, infield, annexes, connexes, parts, pendicles, and pertinents thereof whatsoever, lying within the parish of Dunsmore or Dunscore and Sheriffdom of Dumfries, according to the ancient meiths and marches thereof; as said lands are described in notarial instrument in my favour, recorded in the particular register of sasines, &c., kept at Dumfries for the shire thereof, and the Stewartries of Kirkcudbright and Annandale, the fourteenth day of June eighteen hundred and sixty-six; but these presents are granted and shall be accepted by the said University and Senatus Academicus thereof, on the terms, for the purposes and under the conditions hereinafter written, viz.: Said estate is not to be sold, but to be kept and administered as land; net annual revenue of it to be divided into ten equal bursaries, to be called, as aforesaid, the "John Welsh" Bursaries. The Senatus Academicus to bestow them on the ten applicants entering the University who, on strict and thorough examination and open competitive trial by examiners whom the Senatus will appoint for that end, are judged to show the best attainments of actual proficiency and the best likelihoods of more, in the department or faculty called of Arts, as taught there; examiners to be actual professors in said faculty, the fittest whom the Senatus can select, with fit assessors or coadjutors and witnesses if the Senatus see good; and always the report of said examiners to be minuted and signed, and to govern the appointments made, and to be recorded therewith. More specially, I appoint that five of the John Welsh bursaries shall be given for best proficiency in mathematics (I would rather say, "in Mathesis," if that were a thing to be judged of from competition), but practically, above all, in pure geometry, such being perennially the symptom, not only of steady application, but of a clear methodic intellect, and offering, in all epochs, good promise for all manner of arts and pursuits. The other five bursaries I appoint to depend (for the present and indefinitely onwards) on proficiency in classical learning—that is to say, in knowledge of Latin, Greek, and English, all of these or any two of them. This also gives good promise of a mind; but, as I do not feel certain that it gives perennially, or will perennially be thought in universities to give the best promise, I am willing that the Senatus of the University, in case of a change of its opinion on this point hereafter in the course of generations, shall bestow

these latter five bursaries on what it does then consider the most excellent proficiency in matters classical, or the best proof of a classical mind, and directs its own highest effort towards teaching and diffusing, in the new generations that will come. In brief—five bursaries for proficiency in mathematics, especially in pure geometry; and five for proficiency in classics, Latin and Greek and English—this, so far as we can practically see ahead at present, yet with liberty to modify the latter five, should new and better light arise, and the Senatus come to be convinced that such light is better, expresses my intention and desire in regard to occupants of the "John Welsh" Bursaries. Bursaries to be open to free competition of all who come to study in Edinburgh University, and who have never been of any other university; competition to be held on, or directly before or after, their first matriculation there. Bursaries to be always given, on solemnly strict and faithful trial, to the worthiest; or if (what in practice can never happen, though it illustrates my intention), the claims of two were absolutely equal, and could not be settled by further trial, preference is to fall in favour of the more unrecommended and unfriended. Under penalties graver than I or any highest mortal can pretend to impose, but which I can never doubt—as the law of eternal justice, inexorably valid, whether noticed or unnoticed, pervades all corners of space and of time—are very sure to be punctually exacted if incurred, this is to be the perpetual rule for the Senatus in deciding. Bursars are to continue actual students in the Faculty of Arts, and to be visibly attending one or more classes in the same, so long as their bursary lasts, are not permitted to hold any other bursary or similar endowment in the University, are permitted to compete for any other bursary, scholarship, or fellowship falling open there, but, if successful, shall renounce the bursary they held. Bursaries to last till the usual term of admittance to trial for graduation as Master of Arts (that is, for four years as things now stand), or till decease or misbehaviour of the holder, if sooner, new appointment to be made at opening of next University Session. And so may a little trace of help, to the young heroic soul struggling for what is highest, spring from this poor arrangement and bequest; may it run, for ever if it can, as a thread of pure water from the Scottish rocks, tinkling into its little basin by the thirsty wayside, for those whom it veritably belongs to. Amen. Such is my bequest to Edinburgh University. The above said lands, and others hereby mortified and disponed, to be holden *a me vel de me*; and I resign the said lands and others for new infeftment or investiture, but always on the terms, for the purposes, and under the conditions herein above written; and I assign the writs; and I assign the rents to become due for the said lands and others from and after the period of my death; and I reserve my liferent of the said lands and others, and full power to alter, innovate, or revoke these presents in whole or in part; and I dispense with the delivery hereof; and I consent to the registration hereof for preservation. IN WITNESS WHEREOF these presents written upon this and the two preceding pages by James Steven Burns, clerk to John Cook, Writer to the Signet are subscribed by me at Chelsea the twentieth day of June one thousand

eight hundred and sixty-seven years, before these witnesses—John Forster, barrister-at-law, man of letters, &c., residing at Palace Gate House, Kensington, London; and James Anthony Froude, man of letters, residing at number five Onslow Gardens, Brompton, London.—(Signed) T. CARLYLE. John Forster, witness; J. A. Froude, witness.

University Certificates in Arts For Women.

I. Candidates, before they can receive certificates, must have studied in *at least three* of the Classes of the "Edinburgh Association for the University Education of Women," that are recognised by the Senatus Academicus; and they must also have passed the Local examinations either of the University of Edinburgh, of one of the other Scottish Universities, or of the Universities of Oxford or Cambridge.

II. Candidates who have passed any of the aforesaid Local examinations may present themselves at the Edinburgh University examinations for the certificate in Arts, either in *April* or in *October*—in the subjects of any one or more, or of all of the classes attended by them. After they have passed in not less than three subjects, they will receive a University certificate in Arts.

III. The Classes at present sanctioned and approved by the University are the following: *Department of Language and Literature*—English Literature, Latin, Greek, Biblical Criticsm; *Department of Philosophy*—Psychology and Logic, Moral Philosophy, Political Economy, Theory of Education, Fine Art; *Department of Mathematics and Physical Science*—Mathematics, Experimental Physics, Chemistry, Geology, Botany, Zoology, and Physiology.

IV. The University certificates in Arts for women are of two grades—Pass certificates and Honour certificates.

V. Honour certificates in Arts will be awarded to those candidates who, having passed a satisfactory examination in at least three subjects, have, in a further and Special examination for Honours, exhibited high proficiency in any *one* of these subjects.

VI. Candidates for the *Local examinations* of the University, which are held in June, must send their names and addresses to the "Secretary of the Local Examination Board, University, Edinburgh," before the 1st June in each year.

VII. Candidates for *Ordinary* and for *Honour* University certificates in Arts must send their names and addresses, and the subjects in which they wish to be examined, to the Clerk of the University, together with proof that they have passed the Local examinations—before the 15th March or the 1st October in each year.

VIII. The *fee* for the *Local examinations* Junior certificate is £1, and for Senior certificate £1 10s; but where the candidate has pre-

viously obtained a Junior certificate, the fee for Senior is only £1. Fee for the *University certificate in Arts*, £2 2s.—to be paid to the Clerk of the University. No additional fee for an Honour certificate.

Civil Service of India Examinations.

The University of Edinburgh now being one of those institutions selected by the Secretary of State for India in which candidates for the Civil Service of India may pass their probation, arrangements have been made by the Senatus for the accommodation of selected candidates in the house either of one of the professors or of some suitable person sanctioned by the Senatus. Such selected candidates will be under the supervision of the Principal and Deans' Committee, who will undertake responsibility for their conduct and enforce rules of discipline upon them.

The Civil Service Commissioners have been requested to inform candidates for the Indian Civil Service that "in the event of their being appointed to the Service, a clause will be introduced into their Covenants by which they will bind themselves to agree to such regulations for the provision of pensions for their families as may be approved by the Secretary of State for India in Council."

Subjects of Examination for Students of Divinity and Candidates for Licence (adopted by the Presbytery of Edinburgh on the 27th March, 1878).

I.—*For Students entering the Divinity Hall the First Year.*—(*See Synopses of Divinity Classes.*)—I. The History contained in the Old Testament Scriptures from Genesis to 2 Samuel (inclusive) and the four Gospels—accurate knowledge of the narrative, as shown in ability to narrate an incident or sketch a character according to the Scripture record. 2. The Shorter Catechism.

II.—*For Students entering the Hall the Second Year.*—1. *Latin*: Cicero De Natura Deorum, books i. and ii. 2. *Greek*: The Epistle to the Galatians, to be read critically, as in Lightfoot's Edition, with Introduction, Notes, and Dissertations. 3. *Hebrew*: The Grammar, and Genesis, chapters i.-viii. 4. *Evidences of Christianity*: External Evidences; Butler's Analogy, part ii. 5. *Biblical Knowledge*: The Rites and Institutions of the Mosaic Law according to Oehler's Old Testament Theology; examination on the Books of the Old Testament from 1 Kings to Nehemiah inclusive. 6. *Church History*: The Acts of the Apostles and History of the Church up to A.D. 323, as in Kurtz, I., §§ 1-63.

III.—*For Students entering the Hall the Third Year.*—1. *Latin*: Calvin's Institutes, lib. iv., cap. xvii. 2. *Greek*: Gospel accord-

ing to St. John, to be read critically—special examination as to its date and authorship. 3. *Hebrew*: Genesis, chaps. xl.-l. 4. *Biblical Knowledge*: The Prophetical Books of the Old Testament, and its chief Messianic Predictions—students to be able to give an account of the contents of any book or the bearing of any prophecy. 5. *Church History*: The Sixteenth Century as in Kurtz, with M'Crie's Life of Knox. 6. *Systematic Theology*: Doctrines of the Divine Nature and Attributes, and of the Trinity; Dr. Crawford's Mysteries of Christianity. *N.B.*—Students availing themselves of the alernative curriculum *of two full sessions and three partial sessions* shall, before commencing their *fourth* session, be examined on the subjects in Section II., and before commencing their *fifth* session, on the subjects in Section III.

IV.—*For Students applying for Licence as Probationers.*—1. *Latin*: Cicero De Officiis, book ii.; Horace's Ars Poetica. 2. *Greek*: Xenophon's Memorabilia, book ii.; and the Epistle to the Philippians, as in Lightfoot's Edition, with Introduction, Notes, and Dissertations. 3. *Hebrew*: Psalms i. to xx. 4. *Logic and Metaphysics*: Fallacies; Induction as in Jevons' Elementary Lessons in Logic; Theories of Perception as in Reid's Intellectual Powers, Essay II., with Hamilton's Dissertations, B to D*, inclusive. 5. *Moral Philosophy*: Ethical Theories and Natural Theology, with Stewart's Outlines and Butler's Three Sermons on Human Nature. 6. *Natural Philosophy*: Statics and Dynamics as in Thomson and Tait's Elements of Natural Philosophy. 7. *Church History*: History of the Church of Scotland from the Reformation to the Revolution, with M'Crie's Sketches. 8. *Biblical Criticism*: The principal Manuscripts and Disputed Passages of the New Testament. 9. *Systematic Theology*: The Confession of Faith, with Dr. A. A. Hodge's Commentary.

Regulations regarding Applications for the Additional or Non-Professorial Examinerships in the University.

Of these non-professorial examinerships there are two in Divinity, two in Law, three in Arts, one in Civil Engineering, and thirteen in Medicine and Surgery:

1. Applicants should lodge nine copies of their applications (one of which should be signed), and nine copies of any testimonials they may desire to present, with the Secretary of the University Court, not later than one week before the day fixed for making appointments in each case.

2. Applicants who send in testimonials must not send more than four for any one appointment.

3. The days for making appointments to the Additional Examinerships falling vacant in the ordinary course are: in Arts, on the second Monday of July for the period commencing on the 1st October following; in Divinity, Law, Medicine and Surgery, and in the Civil Engineering Department of Science, on the first Monday after the 19th January in each year for the period commencing on the 1st January preceding.

4. The appointments in Divinity, Arts, Law, and Civil Engineering Department of Science are for three years. The appointments in Medicine and Surgery are for one year, and the persons appointed may hold office by annual reappointment for a period of five years, but not longer, except under special circumstances.

5. Persons may be appointed to examine in two of the thirteen subjects of the examinations for Graduation in Medicine, but not in more, and not in more than one subject in any one division of the examinations.

6. Every applicant for an appointment in Divinity must hold the degree of B.D. from a Scottish University.

7. Every applicant for an appointment in Arts must be a member of the General Council of a Scottish University.

Emendations in the foregoing Text.

After the foregoing account of Edinburgh University was printed, the following emendations of the text were received by favour of the University authorities; and the reader who may be interested is recommended to consult them:

Pages 245-51.—*Classes in the Faculty of Arts.*—The programmes of study given under this heading are fair specimens of the work done in the various classes; but it must be noted that, although a similar standard is kept up, the books used and work prescribed are, in some of the classes, entirely changed annually, and in others partially. The following changes were made for the year 1883: In GREEK, *Second Class*, Plutarch and Lucian are omitted from the range of alternative authors, and Plato is added. In LOGIC AND METAPHYSICS, it is explained, in respect of the *Junior Class*, that the junior or ordinary course is pursued on five days in each week, at 1 o'clock. The statement of the subject of Physiological Psychology, *special*, is amended as being "an examination of the faculties of intellect implied in the origin, growth, elaboration, and ultimate rational constitution of human knowledge." In the same study, and concerning the same class, the subject of Formal Logic is restated as "the criteria of consistency in discursive or inferential thought." As to the Senior Class, for Metaphysics and History of Philosophy, the lectures

mentioned are put as "a course on Metaphysics and the History of Philosophy," intended for advanced students. The references made to the chapter in the Professor's "Berkeley," and to the books proposed for Honours at graduation, as well as to those for the Vans Dunlop examinations, are struck out. Further, it is notified, as to the days fixed for the course, that they are three in each week. In NATURAL PHILOSOPHY, respecting the *Lower Division*, the subject of the Voluntary Essay for the year is announced as "Contour Lines and their application in various branches of Physics." To the information on the *Physical Laboratory* it is added that "a Practical Class, for the instruction of beginners in the elementary processes of measuring Time, Mass, Length, Angle, Force, &c., will be formed in the winter and also in the summer sessions."

Pages 251-7.—*Classes in the Faculty of Science.*—In ENGINEERING (CIVIL AND MECHANICAL), in addition to the course described, which is for one session only, details are given of a Second Session: 1. As in the first session; 2. Equilibrium and Stability of Frames, Bracing Cords, Ribs and Linear Arches; 3. Strength of Materials, Stretching, Crushing, Breaking, Bending, and Twisting; 4. Strength of the Simpler Forms in which Materials are used—screws, bolts, studs, rivets, shafts, belts, toothed wheels, brackets, bearings, cranks, ropes, chains, wire, &c.; 5. Application of Mechanical Principles to Combined Structures, especially to Roofs and Bridges; 6. Principles of Kinetics—Newton's Laws of Motion, Conservation and Transformation of Energy; 7. Application of the Principles of Kinetics to Prime Movers, especially to the Condensing Steam Engine; 8. Theory of Heat Engines. The remarks on examinations and questions apply equally to both sessions. In GEOLOGY AND MINERALOGY, the second item, relating to *Astronomical Geology*, is struck out. Of the prescribed *text books*, "Elementary Lessons in Physical Geography" (Macmillan's School Class-book Series) is struck out. In THEORY, HISTORY, AND ART OF EDUCATION, I. *Theory, or Philosophy of Education*, the "General Conclusions as to Education as a Science" are limited to conclusions from the preceding *data*. In FINE ART, intimation is given of the subject of the Lectures for 1882-3, viz., "the History of Art in Europe from the time of the decline of Classical Sculpture and Painting, special attention being paid to the religious art of Italy and of Northern Europe and to the influence upon Art of the Renaissance." The lectures were to be largely illustrated by examples by means of casts, drawings, &c. Further, to the studies enumerated, one more is added—that of Celtic Languages, History, Literature, and Antiquities.

Pages 257-9.—*Faculty of Divinity.*—For the programmes given of the HEBREW Classes, the following are substituted: *Junior Class*: Grammar and Exercises (Davidson's "Hebrew Grammar"); Translations into Hebrew Prose; Readings and Explanations of easy Prose and Poetical Passages in the Old Testament. *During session* 1882-83: A part of Genesis, the Book of Ruth, and Selected Psalms to be read; Oral and Written examinations. *Senior Class*: Grammar (Davidson or Gesenius); Müller's Hebrew Syntax; Hebrew Prose Composition; Readings and Explanations of the Historical, Poetical, and Prophetic Books of the Old Testament. *During session* 1882-83: The second book of Samuel, Psalms CXX. to CL. inclusive, and the books of Obadiah, Jonah, and Micah to be read critically; Discussion of Questions regarding the Date, Authorship, Character, and Contents of the books read; Occasional Lectures on the Hebrew Language and Literature; Oral and Written Examinations.

To the three classes enumerated—DIVINITY, HEBREW, DIVINITY AND CHURCH HISTORY—is added a fourth, BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES. *Subjects of course for* 1882-3: *Old Testament Course*: The Prophets and the Canon. *New Testament Course*: The adoption of the New Testament Canon; the History of the Disputed Books; and an account of some of the Rejected Books, Gnostic and Apocryphal. *Text books*: "Canonicity" (especially the Introduction, sections 9, 10, 15, 16; and text, parts iii., iv.); Greek Testament; Schmoller's "Hand Concordanz;" Grimm's "Lexicon;" N. T. Oehler's "Old Testament Theology." There are written and oral examinations in which all regular students are required to take part, and subjects of occasional essays are also suggested.

Pages 259-63.—*Faculty of Law.*—In Section V., HISTORY, the subject is described as the History of England with special reference to Constitutional Law. Students are recommended to consult Stubbs' "Select Charters," and Hallam and May's "Constitutional History," and "The Annals of England" (Oxford and London, Parker, 1876). Reference to be made to the principal authorities for the different periods in the course of the lectures. For Constitutional Law students are recommended to consult Stubbs' "Select Charters" and "English Constitutional History"; Hallam's "Middle Ages," chap. viii.; Hallam's "Constitutional History of England from the reign of Henry VII. to George II."; Sir Thomas Erskine May's "Constitutional History for the period from the Accession of George III."; "The English Constitution"; Guizot's "Lectures on Representative Government"; R. Sneist's "Self Government in England" (third edition, Berlin, 1871); "Geschichte und heutige Gestalt der Aanter und des

Verwaltungsrechts in England" (second edition, Berlin, 1866); and "Blackstone's Commentaries," book iv., of Public Rights. The course extends over several sessions and departments in Classics.

Pages 264-7.—Regulations for Graduation in Arts.—In the regulations for the ordinary curriculum of *four winter sessions*, reference is incidentally made to a curriculum of *three winter sessions*, dependent upon a prescribed Entrance examination. The particulars of this examination are afforded below; and, following these, are detailed the Pass examinations for Master of Arts.

Entrance Examination for Curriculum of three Sessions.

In terms of Regulation II., Entrance examinations are held to students entering their *first* session in the Faculty of Arts, who desire to be enabled to complete their curriculum in Arts within three winter sessions. At these examinations they will be asked to translate: (1) A simple passage from Livy or Cicero into English; (2) A passage of plain English into Latin; (3) A passage from Xenophon into English; (4) A few easy sentences from English into Greek, for the sake of testing their knowledge of Greek Grammar and Elementary Syntax. *N.B.* Great stress will be laid on grammatical accuracy in the translation from English into Latin Prose.

Entrance Examination in Mathematics.—For students at the commencement of the first session of their attendance at the University who desire, with a view to a degree, to attend the Second Mathematical Class, without attending the first, the subjects of examination will be: Arithmetic; Euclid, books i., ii., iii., iv., and vi., or their equivalent; Elementary Algebra and Trigonometry; and Conic Sections treated geometrically.

Pass Examinations for Master of Arts.

Candidates who have not completed their curriculum in Arts for degree of M.A. are recommended by the Faculty to present themselves for examination in October rather than in April.

The subjects for the Pass examinations are as follows. It must, however, be observed that in the examination for all degrees in this University the books, &c., are to some extent changed annually, although a similar standard is retained.

A.—Department of Classical Literature.—*Latin.*—Horace, Satires, Epistles, i.; Cicero, Letters to Atticus, i.; Tacitus, Histories, iii.; a passage from a Latin author not prescribed; Latin prose; Roman History—General knowledge of the history of the Republic, and a minute knowledge of the period from the death of Sulla to the battle of Actium; Roman Literature—Lives and Works of Cicero, Virgil, Horace, and Tacitus; Ability to translate into Latin prose is required of every candidate.

Greek.—Thucydides, book ii.; Isocrates, Panegyricus; Euripides, Bacchae; Homer, Iliad, book vi.; a passage from an easy Greek author, not prescribed; Greek History and Literature; Laws of Hexameter and Iambic verse; a few

sentences of plain English to be turned into Greek, which may not be omitted by any candidate.

B.—DEPARTMENT OF PHILOSOPHY.—*Logic and Metaphysics.*—The Class Lectures in Logic and Psychology; Fowler's Inductive Logic; the Professor's Berkeley, in "Philosophical Classics" (Blackwood)—Selections, pp. 1-90, pp. 223-265.

Moral Philosophy.—The Class Lectures—Handbook of Moral Philosophy; Butler's Sermons, i.-iii.; Mackintosh's Dissertation.

Rhetoric and English Literature.—Style and the Principles of Literature—Class Lectures; History of the English Language—Lectures; and the first five chapters of Morris's Historical Outlines of English Accidence; History of English Literature, more particularly from 1580 to 1688—Lectures; Morley's Text-book; and the portions of Hallam's Literature of Europe that relate to English writers of the period mentioned; Special Readings required—Chaucer's Clerkes Tale (Clarendon Press Edition); Shakespeare's King Henry V.; Milton's Areopagitica and Samson Agonistes; Carlyle's Essay on Burns.

C.—DEPARTMENT OF MATHEMATICS AND PHYSICS.—*Mathematics*: Arithmetic; Euclid, books i., ii., iii., iv., vi., and xi., or their equivalent, with their application to Mensuration; Algebra, Trigonometry, Conic Sections, Geometrical and Analytical. Candidates must show sufficient knowledge in each of the subjects of examination.

Natural Philosophy.—Elementary Dynamics; Plane Astronomy and Experimental Physics; Candidates must show sufficient knowledge both of Dynamics and of Experimental Physics.

Candidates for examination or graduation must be matriculated students of the University for the year in which they appear for examination or graduation; and, by Act of Parliament, candidates for graduation are also required to pay the registration fee of £1 as members of the General Council before they can be presented for graduation.

Graduation in Arts with Honours.—To the regulations given under this head is added a detail of the examinations, with an intimation that the books, &c., are to some extent changed annually.

Examinations for Graduation in Arts with Honours.

DEPARTMENT OF CLASSICAL LITERATURE.—Latin: Lucretius, i., ii., iii., v.; Virgil, Æneid; Juvenal; Tacitus, Histories; Pliny, Epist. i.-vi.; Latin Prose, Latin Verse optional; Translation from Latin Authors not prescribed; Roman History—a general knowledge of the history of the Republic, and a minute knowledge of the period from the battle of Actium to the Accession of Vespasian; Roman Literature—Poets, from Plautus to Juvenal. N.B.—The questions in History and Literature will chiefly be directed to test a minute knowledge of the authors prescribed.

Greek: Homer, Iliad, i.-viii. inclusive; Æschylus, Agamemnon; Thucydides, i. and ii.; Aristophanes, Knights; Demosthenes, Contra Meidiam; Plato, Pro-

tagoras; Aristotle, Ethics, i.-iv. inclusive; Greek Prose Composition—Translation from Greek Authors not prescribed; Greek History and Literature.

B.—Department of Philosophy.—*Logic and Metaphysics*: The Advanced Class Lectures in Metaphysics and History of Philosophy; the Professor's "Berkeley," in "Philosophical Classics" (Blackwood), and also "Selections from Berkeley; Plato, Theætetus; Locke, Essay on Human Understanding; Hume, Inquiry concerning Human Understanding; Kant, Critique of Pure Reason; Hamilton, Lectures on Logic and Discussions, i. ii.; Mill's Logic, books iii. and v.; a general knowledge of the History of Philosophy.

Moral Philosophy.—The Class Lectures for advanced students; Plato, Republic, i.-vii.; Aristotle, Ethics (omitting v., vi., vii.); Spinoza, Ethics; Hume, Principles of Morals; Reid, Essays on Active Powers; Kant, Metaphysic of Ethics.

C.—Department of Mathematics and Physics.—The advanced portions of the Elements of Algebra, Trigonometry (Plane and Spherical), and Conic Sections, together with the ordinary portions of the Differential and Integral Calculus, and Calculus of Finite Differences (Elements of Quaternions at the option of the candidate). The Elements of Experimental Physics generally; with the simpler applications of Mathematics to Dynamics, and to one or more branches of Natural Philosophy, such as Geometrical or Physical Optics, Frictional or Voltaic Electricity, at the option of the candidate.

D.—Department of Natural Science.—*Chemistry*: General Principles of Chemical Combination and Action; Classification of the Elements; Classification of Acids, Salts, and Bases.

Botany.—Demonstration of the Organs of Plants (Vegetable Organography); Functions performed by Leaves and by the parts of the Flower; Principles of the Natural System of Classification as illustrated by the System of De Candolle—fresh specimens of plants to be referred to their Classes, Sub-Classes, Sections, and Orders; General facts connected with the Distribution of Plants over the globe. Under *Regulations for Graduation in Science* a fuller statement of subjects is given. (Candidates are referred to Balfour's "Class Book" or "Manual of Botany.")

Zoology.—General Principles of Zoological Classification; General Laws of Animal Structure and Development; Distinguishing Characters of all the Primary Groups and Classes of the Animal Kingdom.

Geology.—Agents of Geological Change—Origin and Composition of Rocks and Rock-forming Minerals—Structure of Rock Masses; Stratified formations of Britain, with the characters and distribution of the more important genera and orders of plants and animals found in them.

The candidate may select any two of the above subjects, in one of which he will be subjected to an examination equivalent to that in the same subject at the *Second* B.Sc. examination; and in the other, to an examination of the same character as that required at the *First* B.Sc. examination. Can-

didates must announce to the Dean, on or before March 24, the subjects which they select.

Pages 267-8.—*Regulations for Graduation in Divinity.*—After the regulations given for graduation as Bachelor, is to be interpolated, as to the degree of *Doctor of Divinity* (D.D.), that it is conferred *honoris causa tantum*. It is further intimated that, before being presented for graduation, the candidate is required to pay the registration fee of £1.

Pages 268-72.—*Graduation in Law.*—The intimation made as to other faculties is repeated, that, before graduation, the candidate is required to pay the registration fee as a member of the General Council.

Pages 272-8.—*Graduation in Science.*—Respecting the Bachelorship of Science and the Doctorate in Science, these two degrees, according to the text, are conferred in Physical and Natural Science, in Public Health, and in Engineering. An emendation goes to include Mathematical Science also. As to the *fees* payable for degrees in Science, it is further interpolated that either for the B.Sc. or the D.Sc. the amount is £5 5s.

Pages 296-304.—*University Scholarships in the Faculty of Arts.*—The numerical order of some of these is amended, owing to certain interpolations made. The *Vans Dunlop scholarships*, instead of being XXX.-XXXV., are made XXX.-XXXVI.; the *Skirving scholarship for Moral Philosophy*, from XXXVI. becomes XXXVII.; and the *Lang scholarships*, numbered XXXVII., are put as XXXVIII.-XLII.

To the *Vans Dunlop* group, which in the text appear as six in number, a seventh scholarship is noticed as awarded for History:

VII. *History.*—The competition is open to all matriculated students who have regularly attended classes in the University for not less than two and not more than six years, who have also attended one or more courses of lectures either by the Professor of History or by the Professor of Ecclesiastical History, and who have not discontinued attendance at the University for more than one year immediately preceding the period of competition. The *examination* will comprise the History of Greece or that of Rome, the History of one modern Continental nation, the History of England, and the History of Scotland. The precise subjects of examination will be published at least one year before the date of competition. The scholarship will be awarded by competitive examination. The examiners are the Professor of History, the Professor of Ecclesiastical History, and either the Professor of Humanity or the Professor of Greek. The conditions of tenure are the same as those applicable to the other Vans Dunlop scholarships in Arts.

Two other scholarships are noticed, numbered and named as under:

XLIII. *Downie Scholarship.*—The late Miss Downie, of Appin, founded a scholarship of £100 per annum, to be held for three years, at either Edinburgh or Glasgow University. The following are the regulations: (1) The candidate must be a native of the parish of Appin; (2) he must not be under fifteen years of age—*i.e.*, he must have completed his fifteenth year on or before the day fixed for names to be given in; and (3) he must be of well-known good moral character, of promising capacity, and have chosen a learned profession, and he must state in his application which learned profession he has chosen. Application may be made to Robert B. Blyth, W.S., 16, South Charlotte-street, Edinburgh.

XLIV. *Steven Scholarship in Agriculture.*—This scholarship was founded in 1882 by the Misses Steven, of Bellahouston, in memory of their brother Moses Steven, Esq. It consists of the proceeds of £2000 awarded annually, and the first award to be made at the end of session 1882-3. The scholar is required to visit the annual exhibitions of the four leading agricultural societies, or such as the Professor of Agriculture shall appoint: The Royal Agricultural Society of England; the Bath and West of England Agricultural Society; the Highland and Agricultural Society of Scotland; Royal Agricultural Society of Ireland.

University of Glasgow.

The University is governed by the Chancellor in conjunction with the General Council, comprising the members of the University Court, the Professors, and graduates, together with certain undergraduates of a prescribed standing. The University Court consists of the Rector, the Principal, the Dean of Faculties, and several assessors appointed either by nomination or election; and, among other privileges, has the power of reviewing the decisions of the Senatus Academicus. The last-named body, made up of the Principal and Professors, regulates the teaching and discipline, and administers the University property and revenues.

The student is required, at the beginning of each session, to matriculate by enrolling his name in the University Album, before joining any class. The office of the Clerk of Senate is open for this purpose on and after the 17th October, daily, excepting the holidays at the Sacrament. The Matriculation fee is £1 for the academical year; for the summer session, 10s. Students are entitled to admission to the University Library, and, under certain conditions, to the Hunterian Museum; they are also entitled to vote for the Lord Rector. They are classified as students in Arts, Theology, Law, and Medicine, and, for academical purposes, are divided into Togati and Non-togati—the students of the Humanity, Greek, Logic, Ethics, and Natural Philosophy classes being Togati or gown students, from being required to wear the ancient academical robe—a scarlet cloak. Under the Non-

togati, or ungowned students, are comprehended all those who, having finished their course in Arts, are prosecuting their studies in the other Faculties, with a view to their intended professions; and it comprises also other persons who, though engaged in other avocations, are disposed to cultivate literary pursuits, or to extend their acquaintance with some favourite branches of learning or science. A distinction is also made between public and private students. The former are required to undergo examinations, and to read or perform exercises on the subjects treated of in the lectures—and they only are allowed to reckon their sessions of study as a qualification for proceeding to degrees in the several Faculties. Medical students have access, for the usual attendance in the wards and on the Clinical Lectures, to the Royal Infirmary in the eastern part of the city, and to the Western Infirmary in the immediate vicinity of the University.

Candidates for the Army.

An examination for Army candidates, which is accepted as equivalent to the examination at the English and Irish Universities for the same purpose, consists of three out of the seven examinations required for the ordinary degree of M.A., but one subject must be taken out of each of the three separate departments of Classical Literature, Mental Philosophy, and Mathematics. Candidates must not be over twenty-one years of age. *Fee*, £2 2s. This examination is intended only for students who have actually attended classes in the University.

Faculty of Arts.

The Faculty of Arts embraces the classes of Humanity, Greek, Logic and Rhetoric, Moral Philosophy, Natural Philosophy, Mathematics, and English Language and Literature, on all of which attendance is required for a degree in Arts, and also the classes of Practical Astronomy, and Civil Engineering and Mechanics.

HUMANITY.—The class consists of three divisions—Junior, Senior, Private.

The *Junior Class* meets from 8 to 9, and from 11 to 12 a.m. during five days of the week. Students otherwise engaged may attend at one hour only (either at 8 a.m. or 11 a.m.) with the sanction of the Professor, and will obtain certificates of attendance qualifying for the M.A. degree. The subjects of study are: Extracts from the Elegiac Poets; a book of Virgil; a speech of Cicero, or a book of Livy; Latin Prose Composition; Grammar; Prosody; Roman History and Antiquities. On entering the Junior Class students are expected to have a good knowledge of Latin Grammar, and to be able to trans-

late at sight simple passages from Latin into English, and simple sentences from English into Latin. Early in the month of November, a written examination of the whole class on these subjects is held, including a short passage for translation from some easy author. A specimen of the examination papers will be found in the "Calendar."

The *Senior Class* meets from 9 to 10 a.m., and from 1 to 2 p.m. during five days of the week. Students otherwise engaged, or presenting valid ground of exemption, are not required to attend at 1 p.m. In the same manner, students unable to attend at 9 a.m. may attend the class at 1 p.m. only (which will rank as a Public Class), and will receive a ticket of attendance qualifying for the degree of M.A., provided that they acquit themselves sufficiently well in the examinations, and perform the written exercises prescribed in the class. Such students are also subject to oral examination throughout the session. The subjects of study in the class at 9 a.m. are: The works of Horace; Cicero; Livy; Tacitus; Latin Prosody; Roman History and Antiquities.

Students desiring to attend the *Private Class* at 1 p.m. may attend daily; or on Mondays, Wednesdays, and Fridays only. A course of five sessions embraces: Lectures and Prelections on Plautus, Lucretius, Catullus, Virgil, Persius, Juvenal, Martial, Tacitus.

Fees.—Public Class, £3 3s.; Private Class daily, £1 11s. 6d.; Mondays, Wednesdays, and Fridays only, £1 1s.; students who return for a third session, £1 1s.

GREEK.—The Class has three divisions—the Senior, the Middle, and the Junior. Students not requiring a public certificate may attend as private students at the second daily hour of the Senior Class. A public certificate for attendance at that hour can also be obtained on the conditions stated below.

The *Senior* Greek class meets at 8 a.m. and 2 p.m. on every week-day except Saturday. At 8 a.m. the Class reads Homer, Herodotus, and Thucydides, or such other authors as may be appointed for the session. The class is daily examined orally in a prescribed portion of the book which is being read. At 2 p.m. the Professor lectures on Greek authors of a more difficult character, such as the dramatic poets and the philosophers. Exercises in Composition form a part of the class work at 2 p.m. Students who, for a reason deemed valid by the Professor, desire to be exempted from attendance at 8 a.m., can obtain a certificate qualifying them for the degree of M.A. by attendance at 2 p.m. only, on condition of being liable to occasional oral examination, and passing the written examinations.

The *Middle* Greek Class meets at 10 a.m. on every week-day except Saturday. The authors usually read are Xenophon, Herodotus, and Homer. Written exercises in Elementary Greek Composition are performed every week during the greater part of the session. In the course of the academical year a thesis is proposed for an English Essay on some important subject connected with the History or Literature of Greece.

The *Junior* Greek Class meets at 12 noon, on every week day except Saturday. The earlier part of the session is devoted to the study of the Grammar. The text-book used by the class is the Greek Grammar of Dr. George Curtius, in the larger edition of the English translation. It is desirable that students intending to join the Junior Greek Class should study beforehand at least chapters i. to xi. of this Grammar. An examination on Greek Grammar is held early in February. The class then proceeds to read extracts from Greek authors, and to perform exercises.

Fees.—For any public class, £3 3s.; as a private student at 2 p.m., £1 11s. 6d.; third session in any class, £1 1s.

LOGIC AND RHETORIC.—This class meets daily on five days of the week, from 9 to 10 a.m., for lecture, and on Mondays, Wednesdays, and Fridays, from 11 to 12 noon, for oral examination and the reading of exercises and essays. The course of lectures is so arranged as to embrace the following subjects in each session: I. *Psychology and Metaphysics*—under which is given an account of the Faculties and Capacities of the Mind, and of the General Nature, Limits, and Objects of Human Knowledge. II. *Logic*: (A) Pure or Formal Logic, embracing the Doctrine of Notions (Terms), Propositions, Reasonings, Fallacies; (B) Applied or Material Logic, embracing the Theory and Processes of Science (Observation, Induction, Deduction), and the General Laws of Evidence. Instruction in Logic is conveyed partly by means of a text-book. III. *Rhetoric*: A portion of the course is devoted to the Principles of Rhetorical and Oratorical Excellence. The class is annually arranged into two divisions, Senior and Junior, according to the age of the students; and prizes, adjudged by the votes of their class-fellows, are assigned, in each of the divisions, to those who have most distinguished themselves by diligence, proficiency, and ability in the exercises and examinations of the session. The *fee* for the ordinary course is £3 3s.

An *advanced class* for the Higher Metaphysics, embracing the subjects prescribed for Honours in Mental Philosophy, meets twice a week, on Tuesdays and Thursdays, from 1 to 2 p.m. *Fee*, £1 11s. 6d.

N.B.—To qualify for the Arts degree, the Logic Class and the Moral

Philosophy Class must be attended in separate sessions, the Logic Class being taken first.

MORAL PHILOSOPHY.—The Class meets at 8 a.m. on five days of the week for lecture, and at 11 a.m. on Mondays and at 8 a.m. on Saturdays for examination. Public students must attend at the hours of lecture, and either on Saturday at 8 a.m. or on Monday at 11 a.m. for examination. In the lectures Moral Philosophy is treated both historically and systematically. The historical part of the course includes some general lectures on the relation of Philosophy and History, and an account of the most important Ethical and Social theories, ancient and modern. The systematic part of the course includes lectures on Psychology as the basis of morals, on the Principles of Jurisprudence and Social Ethics, and on the Relations of Philosophy to Theology. In alternate years courses of lectures are delivered upon Political Economy, and upon some of the subjects of the examination for the Degree with Honours. *Fee* for the Moral Philosophy Class, £3 3s.; Political Economy Class, £1 11s. 6d.

N.B.—To qualify for the Arts degree, the Logic Class and the Moral Philosophy Class must be attended in separate sessions, the Logic Class being taken first.

NATURAL PHILOSOPHY.—The class meets daily at 9 a.m., and at 11 a.m. or 12 noon. The first hour is chiefly spent in statements of Principles, description of Results of Observation, and Experimental Illustrations. The second hour is devoted to Mathematical Demonstrations and Exercises, and Examinations on the Elementary parts of the course, on Tuesdays and Thursdays, at 11 a.m.; and to a higher Mathematical Course on Mondays, Wednesdays, and Fridays, at 12 o'clock. The *text books* used are: "A Treatise on Natural Philosophy," by Professors Sir William Thomson and P. G. Tait (Cambridge University Press); "Elements of Natural Philosophy," by the same authors (Cambridge University Press); a "Lecture on Navigation," by Professor Sir William Thomson (W. Collins and Sons); "Dynamics," by J. T. Bottomley (W. Collins and Sons); "Hydrostatics," by J. T. Bottomley (W. Collins and Sons); "Heat," and "Elasticity," by Sir W. Thomson, reprinted from the Encyclopædia Britannica (A. and C. Black); Ganot, "Experimental Physics," translated by Atkinson (Longmans and Co.); "Mathematical Tables," J. T. Bottomley (W. Collins and Sons). The more elementary of the treatises by Thomson and Tait, along with Dynamics and Hydrostatics by Bottomley, will be used for the work required of all students of Natural Philosophy in the regular curriculum. The whole or certain specified parts of the larger treatise will be prescribed in con-

nection with voluntary examinations and exercises in the class, and for candidates for the degree of M.A. with Honours. Students who desire to undertake these higher parts of the business of the class ought to be well prepared on all the subjects of the Senior Mathematical Class.

The *Laboratory* in connection with the class is open daily from 10 a.m. to 4 p.m. for Experimental Exercises and Investigations, under the direction of the Professor and his official Assistant, and the Demonstrator in Experimental Physics.

The main *divisions* of the course are: (1) Abstract Dynamics (including Elements of Physical Astronomy); (2) Properties of Matter; (3) Thermodynamics; (4) Illustration. Illustration is conducted partly through examples and calculations; partly by experiment. A programme of the subjects that will be taken up, as far as time permits during the session, is published before the commencement of the session, and may be had on application at the Natural Philosophy Class-room.

Fees.—Natural Philosophy Class, £4 4s.; students of the Second year, £3 3s.; Physical Laboratory, £5 5s.

N.B.—For a degree in Arts attendance on the qualifying course of Natural Philosophy must be subsequent to the completion of the qualifying course of Mathematics.

The Arnott and Thomson Demonstratorship in Experimental Physics was founded in 1875 by Sir William Thomson and Mrs. Arnott, widow of Dr. Neil Arnott, founder of the Arnott Prizes, who invested respectively £2,000 and £1,000 for the purpose of encouraging the study of Experimental Physics in the University of Glasgow. The holder is appointed annually by the Professor of Natural Philosophy, subject to the approval of the University Court.

MATHEMATICS.—*Junior Class.—Lower Division* (or *First year's course*): Subjects: Euclid and Algebra, both from the beginning. Three parallel subdivisions of the class meet daily (except on Saturdays), one from 9 to 10, one from 10 to 11, one from 12 to 1. *Upper Division* (or *Second year's course*), for students who have attended the first year's course, or who have otherwise acquired a knowledge of Euclid, books i., ii., iii., iv., and of Algebra as represented by the first twenty-two chapters (chaps. xiv., xv., xix., excepted) of Todhunter's larger Text-book. *Subjects*: Euclid, books v., vi., and xi., Higher Algebra and Algebra applied to Geometry, Elements of Trigonometry. Two parallel subdivisions of the class meet daily (except on Saturdays), one from 9 to 10, one from 12 to 1.

Senior Class (or *Third Year's Course*).—*Subjects*: Trigonometry,

Analytical Plane Geometry, Differential and Integral Calculus. The Senior Class meets from 10 to 11 daily, except on Saturdays.

Higher Senior Class.—Subjects: Geometry of three Dimensions, Differential Equations, Finite Differences. The class meets at 11-12 on Mondays, Wednesdays, and Fridays.

Attendance on the Mathematical Classes, for not less than two winter sessions, one of which must be on either the Upper Junior or the Senior Class, is required for the degree of M.A., "unless the candidate at the time of his entrance to the University shall satisfy the Professors in the Faculty of Arts, on examination, that he is qualified to attend the Senior Class," in which case, attendance on the Senior Class for one session is sufficient.

Fees.—The fee for each session, £3 3s.; for the Extra Senior Class, £2 2s. No fee is charged for the Extra Senior to students who have completed their qualifying course of attendance for M.A., and who have attended the Senior Class.

N.B.—Attendance on the qualifying course of Natural Philosophy for the degree of M.A. must be subsequent to the completion of the qualifying course of Mathematics. Two sessions of the lower Junior Class of Mathematics do not constitute two sessions of Mathematics for the purpose of graduation in Arts.

PRACTICAL ASTRONOMY.—The Observatory is situated on an eminence in the vicinity of the University buildings. The principal instruments are: A Meridian Circle of three feet six inches diameter, by Ertel of Munich; and an equatorially-mounted Refractor, of nine inches aperture, and thirteen feet focal length, by Cooke of York. The Professor of Practical Astronomy is chiefly occupied in directing the operations of the Observatory; but he also delivers a short course of lectures on Astronomy at the College during the session, and gives expositions on instruments and methods of observation at the Observatory. The *fee* for the course is £1 1s.

CIVIL ENGINEERING AND MECHANICS.—The Professorship of Civil Engineering and Mechanics was instituted by Queen Victoria in 1840, and is in the gift of the Crown.

The courses of the Professor of Engineering comprise a junior and a senior course of Lectures and Examinations designated as "Civil Engineering and Mechanics;" and a junior and a senior practice course of instruction designated as "Office and Field Work in Engineering." Each of these courses commences at the beginning of the winter session, and lasts during the whole of that session—that is, from the beginning of November till the end of April.

The *Junior Class of Civil Engineering and Mechanics* meets on

Mondays, Wednesdays, and Fridays, from 11 till 12 noon. It is intended ordinarily to be taken by students in the second year of their Engineering curriculum. The lectures include generally most of the following subjects: Principles and Practical Methods of Surveying and Levelling and the Principles and use of Theodolites and Levelling Instruments; Mensuration, especially in reference to Railway Earthworks; setting out Railway Curves, and Lines of Railway generally; Tunnelling; Specifications for Engineering Contracts; a brief introduction to Architecture as a Fine Art.

The *Senior Class of Civil Engineering and Mechanics* meets at 4 P.M. daily, Saturdays excepted. It is intended ordinarily to be taken by students in the third year of their Engineering curriculum. The subjects of study from which the courses of detailed teaching are proposed chiefly to be selected, with some variations in different sessions, may be stated briefly as follows: Revision or further prosecution of some of the subjects proposed for the junior course; Elasticity and Strength of Materials; and Strenth, Stability, and Stiffness of Structures; Bracing of Framed Structures: Energy, Mechanical Work, Horse Power; Frictions and allied subjects in applied Mechanics; Principles of Hydraulics; Gauging of Rivers and Streams; Flow of Rivers; Elementary Principles of Thermodynamics; Steam Engines, common Water Wheels, and Turbines; Centrifugal Pumps for raising Water, and Fans; Principles and Mensuration for Shipbuilding; Roofs; Carpentry; Bridges and Viaducts; Works of Drainage and Water Supply; Ventilation and other Sanitary arrangements in Buildings; Ventilation, Drainage and Management of Water in Mines.

The *Junior Class of Office and Field Work* meets on Mondays and Wednesdays, from 1 till 3 P.M. It is intended ordinarily to be taken by students in the first year of their Engineering curriculum. The *Senior Class* meets on Tuesdays and Thursdays, from 1 till 3 P.M., and is intended ordinarily to be taken in the second year of the curriculum. The students of both classes are expected to prosecute studies and perform practical work in the business of the classes, at times extra to those appointed for the regular meetings; and they are occasionally required to attend on Saturdays or other days, for some hours, for indoor or outdoor engagements. The course for these classes comprises generally the following subjects and proceedings, or most of them; the more easy and elementary portions being prosecuted in the Junior Class, and the more advanced in the Senior Class: Lectures and Practical Lessons in Descriptive Geometry, Orthographic and Isometric Projection, and Perspective; Practice in Engineering and Architectural Drawing, and in Surveying, Levelling, Plotting, and Mensuration;

Engineering Excursions. *Fee* for each of the Engineering classes, £3 3s.

Certificate of Proficiency in Engineering Science—Certificates of Proficiency in Engineering Science will be granted to students who shall have gone through the following course of study, practical work, and examinations to the satisfaction of the Board of Examiners.

Ordinary Course for the Certificate of Proficiency in Engineering Science.—First Year: Inorganic Chemistry, five days weekly, 10 A.M. (Chemical Laboratory may be taken in this or any other year, winter or summer session, if selected as part of the course. See below—Third Year.) Mathematics,* Lower or Upper Junior, five days weekly, 9 A.M. or 12 noon; Junior Class of Office and Field Work in Engineering, Mondays and Wednesdays, 1 till 3 P.M.; Geology and Mineralogy, Monday, Wednesday and Friday, 5 P.M. *Second Year*: Natural Philosophy, five days weekly, 9 A.M.—also recommended, if practicable, Tuesday and Thursday, 11 A.M.; Mathematics, Senior or Upper Junior, five days weekly, 10 A.M. or 9 A.M. or 12 noon; Civil Engineering and Mechanics, Junior, Monday, Wednesday, and Friday, 11 A.M.; Senior Class of Office and Field Work, Tuesday and Thursday, 1 till 3 P.M. *Third Year*: Natural Philosophy, five days weekly, 9 A.M.; and Tuesday and Thursday, 11 A.M.; Senior Mathematics, if not previously attended, five days weekly, 10 A.M.; Physical Laboratory, about two hours on three days weekly, or Chemical Laboratory, five days weekly; or the Chemical Laboratory can be attended in any year in summer instead; Civil Engineering and Mechanics, Senior, five days weekly, 4 P.M.

Modifications allowable in Special Cases.—Some moderate deviations from the above course will be arranged for in cases in which the circumstances, duly considered, are found to render such change desirable and suitable; for this purpose, application may be made beforehand to the Board of Examiners in Engineering Science, through the Professor of Engineering as Convener of the Board. Students who commenced, before the summer of 1877, their course of attendance, with the view to obtain the certificate, may complete their courses of attendance according to the arrangements in the "Calendar" of 1876-77.

Examinations, &c.—The examinations for Certificates of proficiency in Engineering Science are carried on partly along with the examinations for degrees in Arts and Science, and partly along with the class examinations and written examinations for the Walker prizes; and the examinations by the Professor of Engineering for decisions in April

* Students who, on entering the University, show themselves qualified to enter the Senior Mathematical Class, by passing the Mathematical part of the Preliminary examination in Arts (see Preliminary examinations in Arts) are not required to attend the Junior Class of Mathematics.

may be commenced on or after the 11th of March. Examinations in Civil Engineering and Mechanics and in Drawing will be held in November, if applied for to the Clerk of Senate on or before the 1st of October. No candidate is admitted to the special examination for the Certificate, in any department, till he has attended the prescribed course of study in that department.

Candidates offering themselves for being tested as to their skill in *Drawing*, with a view to passing in April or in November, must have, in the January preceding, passed with the Professor of Engineering a preparatory test by examination, and by scrutiny of their drawings, or otherwise as may be arranged in special cases. All drawings intended to be submitted for proof of skill in drawing for the Certificate are required to be lodged with the Professor of Engineering on or before the 10th of April, or the 2nd of October in each year.

Attendance on the classes of Mathematics, Natural Philosophy, Chemistry, and Geology, in any chartered university in the United Kingdom having the power of granting degrees, is admitted as part of the course for the above-mentioned certificate, provided the candidate passes a sufficient examination in each branch of Science by the proper authorities of this University.

Candidates for Certificates of proficiency in Engineering Science who are graduates in Arts of any chartered university of the United Kingdom are exempted from study and examination in Mathematics and Natural Philosophy; and if any such graduate has obtained honours in Chemistry or in Geology, he is exempted from study and examination in the science or sciences in which he has obtained Honours.

A *fee* of £1 1s. is paid by all students who receive the Certificate in Engineering Science.

Certificates of Attendance and of Merit in separate Classes.—It is remarked that students who do not find it convenient to undertake or to carry out all the courses of attendance required for the Certificate of proficiency, or for the degree of B.Sc. in Engineering, may in many cases well rest satisfied by their attending such classes as they may deem most suitable to their own objects. They have it open to them to obtain due testimony to their attainments and merits by the ordinary Class Certificates, and marks of special distinction. The primary object of entering on the whole, or on any part, of the Engineering courses ought to be to gain knowledge and skill—the gaining of particular forms of University certificates or testimonies to merit, though valuable when obtained, ought not to be the primary object.

Recommendation.—It is strongly recommended that students of

Engineering should, if possible, get themselves engaged, for two or three summers within the period of their attendance in the University, in engineering or architectural service, in offices, or in workshops, or in works such as railways, water works, or harbour works, in progress.

ENGLISH LANGUAGE AND LITERATURE.—This Chair was founded by ordinance of the Universities Commissioners of date 25th November, 1861, and is in the gift of the Crown. The classes meet from the beginning of the session on five days of the week till the end of February. They have usually consisted of two divisions, Junior and Senior, attendance on either of which qualifies students to proceed to their degrees.

The *Junior Class* meets daily from 2 to 3 p.m. The course, adapted to less advanced or experienced students, consists of a series of lectures on English Composition, a review of a period of English Literature, and a detailed study of the text of some characteristic work of a well-known author.

The *Senior Class* meets from 4.30 to 5.30 p.m.

The *Course* comprises: 1. A series of Philological Lectures, tracing the origin and growth of the English Language from the Anglo-Saxon down to the present day, and illustrating its affinities with other tongues. 2. An exposition of the general principles of Taste, as applied to Style. 3. A historical review of a period of English Literature (including our early Literature), with more minute criticism of some works of the more difficult authors. Public students in both classes are examined *vivâ voce*, and required to pass a written examination (without books) before the close of the session. Written exercises and essays, which will be criticised by the Professor, are also required to be given in by all public students of either class.

Text Books: *Junior*: Arnold's or Spalding's "English Literature"; "Composition Primer," in Macmillan's series; "Tables of History and Literature," by Professor Nichol. *Senior*: Arnold's or Shaw's "English Literature"; Marsh's "English Language"; "Tables of History and Literature," by Professor Nichol; Campbell's "Rhetoric," and Seeley and Abbott's "English Lessons for English People" are also recommended.

Class Fees.—For either class, £3 3s.; for second year's attendance, or senior students who have been in the Junior Class, £2 2s.

Faculty of Theology.

This Faculty embraces the four classes of Divinity, Oriental Languages, Ecclesiastical History, and Divinity and Biblical Criticism.

The following regulations are applicable to students preparing for the Ministry of the Church of Scotland. Under the Act of General Assembly, 1880, consolidating the Acts presently in force in regard to the study of Divinity, all candidates for the ministry are required to attend at the Divinity Hall either three full and regular sessions, or two full and regular sessions and three partial sessions; and to give at least two full sessions of regular attendance on the Classes of Church History, Hebrew, and Biblical Criticism.

Each student, in order to be enrolled *for the first year* of his attendance, must present to the Professor of Divinity, *first*, a certificate from the Presbytery within the bounds of which he usually resides, and by which he has been examined in his knowledge of the Holy Scriptures according to the Authorised Version, and of the catechetical standards of the Church; and, *secondly*, a certificate signed by the Convener or Vice-convener of one of the Four Examining Committees appointed, under the Act of Assembly, 1872, to conduct the examination of students previous to their entering the Divinity Hall.* In order to be admitted to this examination he must produce, in addition to the certificate from the Presbytery recommending him, the diploma of a Master of Arts, or certificates from the several professors under whom he has studied, that he has attended regularly all the classes prescribed by the Church for students who intend entering the Hall—viz., Latin, Greek, Logic, Mathematics, Moral Philosophy, and Natural Philosophy, in such order as is prescribed at the University in which he has studied, and to the extent required for proceeding to the degree of Master of Arts. If he produces evidence that he holds the degree of Master of Arts, or that he has passed all the examinations required for taking that degree, it is competent for the Examining Committee to exempt him from examination in those branches of Literature and Science proficiency in which is denoted by such a degree. The examination also embraces the Elements of Hebrew Grammar.

The student, in order to his enrolment *for each subsequent session* of his course, is required to present to the Professor of Divinity a certificate from the Presbytery within whose bounds he chiefly resides of his having been examined by them on the progress made by him in his studies, and of their satisfaction with the same, as well as a certificate of his good moral character from the minister of his parish.

Each student is required during his curriculum to deliver *six* dis-

* The Examining Committees meet at the respective University seats shortly before the commencement of each session, the times and places of meeting being duly announced in the "Missionary Record" of the Church of Scotland, for July annually, along with the names of the Conveners and Vice-Conveners of the respective Committees.

courses—viz., an Exegesis in Latin on some controverted head in Divinity, a Homily in English, a Critical Exercise on some portion of the original text of the Old Testament, an Exercise and Addition on some portion of the original text of the New Testament, a Lecture on some portion of Scripture, and a Popular Sermon, with such other exercises as the professors may think fit to prescribe. No student can be taken on trials for Licence by any presbytery until he has produced, along with Class certificates from the Professors of Church History, Hebrew, and Biblical Criticism, a certificate from the Professor of Divinity that the discourses so prescribed have been sustained.

The Faculty of Theology have adopted the following regulations as to the delivery of these discourses: (1) That the Latin Exegesis shall be given in to the Professor of Divinity, the Homily to the Professor of Church History, and the Lecture to the Professor of Biblical Criticism, *not later* than the 31st January in the *second* year of the student's course; and (2) that the Popular Sermon shall be given in to the Professor of Divinity, the Hebrew Critical Exercise to the Professor of Oriental Languages, and the Exercise and Addition to the Professor of Biblical Criticism, *not later* than the 31st January in the *third* or last session of the course. The subjects of the Discourses will be prescribed by the professors to whom they are severally to be given in.

DIVINITY.—The course of Theology extends over three sessions. The lectures treat partly of Biblical Theology, partly of the History of Doctrine. A portion of time is devoted to instruction in Systematic Theology on the basis of a text-book, and to the delivery of discourses by the students. In addition to the oral examinations on the lectures, examinations in writing on the studies of the class are held at intervals during the session. The class meets on five days of the week at 12 o'clock. *Fee* for each session, £3 3s.

ORIENTAL LANGUAGES.—*Arrangement of Classes.*—I. *Junior Hebrew Class*, 10 a.m: (1) Hebrew Grammar, from the elements, with progressive exercises, oral and written. (2) Reading from the Scriptures. Students preparing for the Ministry are recommended to take this class before entering the Divinity Hall. II. *Senior Hebrew Class*, 9 a.m.: (1) More advanced study of the Hebrew Grammar. (2) Reading from the Prophetical and Poetical Scriptures, with Lectures and Expositions. Before being enrolled for this class, students must pass an examination on Hebrew Grammar, and Genesis i.-x. inclusive, or an equivalent portion of the Hebrew Scriptures. III. *Private Syriac*

Class, 1 p.m.: Three days in the week, viz., Monday, Tuesday, and Thursday. IV. *Lectures on Old Testament Introduction:* Wednesday, 1 p.m. *Class fee*, £3 3s. Students who have taken two complete sessions may enrol for a third or fourth free. The *fee* for Syriac is £1 1s. The lectures on Wednesday at 1 p.m. are free.

ECCLESIASTICAL HISTORY.—The class of Ecclesiastical History meets from 11 to 12 o'clock, on five days of the week. The course extends over two sessions, and embraces a series of lectures, as well as oral and written examinations, the latter being in part founded on a text-book. To suit the class arrangements, the Church History Class should be taken in two *consecutive* years. The *fee* for each session is £3 3s. By his commission, the Professor of Ecclesiastical History is also Lecturer on Civil History in the University.

DIVINITY AND BIBLICAL CRITICISM—This class meets, on five days of the week, at 10 a.m. The course of lectures is arranged to extend over two sessions; and the class should accordingly be attended in two *consecutive* years. *Fee* for each session, £3 3s.

Faculty of Law.

The Faculty embraces the classes of Law (including Scotch Law and Civil Law) and Conveyancing, and also the class of Medical Jurisprudence. In this Faculty there are also lectureships on Public Law, and on Constitutional Law and History. The lecturers are appointed for the term of four years.

LAW.—1. *Scotch Law*: The course extends to about 100 lectures, besides the meetings of the class for examination; and it embraces as full a course of Scotch Law in each session as the time will permit. It includes lectures on the Sources and Development of the Law of Scotland; the Law of Contracts and Obligations generally, their Constitution and Extinction, Legality and Illegality; the Law of Sale, at Common Law and as affected by Statute; Stoppage *in transitu*; Retention and Lien; Loan; Deposit; Pledge; Hiring, and the Law of Master and Servant; Law of Carriers and Affreightment; Mandate; Partnership; Bills of Exchange; Cautionary Obligations; Marine, Fire, and Life Insurance; Law of Heritage; Rights of Fishing; Servitudes; Teinds; Prescription as applicable to Heritage; Law of Landlord and Tenant; Succession in Heritage and Moveables, Testate and Intestate; Marriage and Divorce, and the Rights of Husband and Wife; Law of Parent and Child; Guardian and Ward; Actions and Evidence; Damages; Bankruptcy; Criminal Law, &c. The *text book recommended* to students is Bell's Principles of the Law of Scotland. The class meets five days a week—viz., every day except Monday, from 8 to 9 a.m.

At intervals throughout the session the hour is devoted to the ordinary class examinations, which are conducted in writing. The *fees* for the Class of Scotch Law are £4 4s. for the first year of attendance, £2 2s. for the second, and £1 1s. for the third. Three *prizes* are given by the University for proficiency in the class examinations. An annual *prize* is also given by the Faculty of Procurators, generally for distinction in a special written examination towards the end of the session.

2. *Civil Law.*—In addition to the class of Scotch Law, a class of Civil Law is formed in alternate sessions. The *text book recommended* is Sandars' Institutes of Justinian. The *fee* for the class is £4 4s.

CONVEYANCING.—The course extends to upwards of eighty lectures, arranged under the following heads: (1) Introductory and Preliminary Lectures, the latter embracing the Authorities to be cited, the Registers to be referred to, and the Stamp Laws to be observed; (2) The essential requisites of, and the clauses common to, all Deeds; (3) Personal Bonds, Personal Contracts (other than Marriage Contracts), and Deeds, *inter vivos*, relating to Moveable Estate; (4) The Feudal and Burgage System, the constitution of Feudal and Burgage Rights, and the transmission thereof by Deeds *inter vivos*, or by Judicial Acts; (5) Heritable Securities; (6) Leases; (7) Marriage Contracts, Bonds of Provision, Testamentary Deeds and Deeds of Entail; (8) The completion of Titles, in case of death, to Heritable and Moveable Estate, whether Testate or Intestate. *Lecture Days*—Tuesday, Wednesday, Thursday, and Friday. *Examination Day*—Saturday. *Fee* for first year's students, £4 4s.; second year's students, £2 2s. *Prizes* are given by the University and the Professor for eminence in the class examinations during the session. *Prizes* are also given by the Faculty of Procurators for distinction in a written examination towards the end of the session, generally on the Completion of Titles in Feudal Conveyancing.

PUBLIC LAW.—The course, which extends to about forty lectures, besides the meetings for examinations, comprises a series of lectures on—1. Abstract Jurisprudence, showing the relation between Law and Philosophy, and between the different branches of Positive Law. *Text book*: Lorimer's "Institutes of Law." 2. A series of lectures on the History of International Law from the earliest times to the present day, illustrating the development of the more important doctrines and showing the present state of the law. *Text book*: Woolsey's "Introduction" (fifth edition). 3. A series of lectures on Private International Law. Written exercises are prescribed weekly, and there is a written examination on each division of the course. Students intending to join the class are recommended to acquire a general knowledge

of the leading events of the Modern History of Europe and America. The class meets from 9 to 10 a.m., on Tuesdays and Fridays, during the winter session. *Class fee*—first year, £3 3s.; second year, £1 11s. 6d.

CONSTITUTIONAL LAW AND HISTORY.—The lectures are partly doctrinal and partly historical. They embrace chiefly the subjects discussed in the text-books prescribed for those who propose taking the degrees of B.L. and LL.B. In the Doctrinal Lectures the following subjects are treated of: The Crown, the Cabinet, the Privy Council, Parliament, Local Government. The Historical Lectures cover the period from the Anglo-Saxon migrations to the present reign. The class meets in alternate years during the summer session in the Faculty Hall, St. George's-place, five days a week—viz., on Monday, Tuesday, Wednesday, Thursday, and Friday, at 5 p.m. *Fee* for the course, £3 3s.

Faculty of Medicine.

The Faculty embraces the classes of Practice of Medicine, Anatomy, Natural History, Surgery, Midwifery, Chemistry, Botany, Materia Medica, Institutes of Medicine, Medical Jurisprudence, Clinical Surgery, Clinical Medicine, and Pathology, on all of which attendance is required for the degree of M.B. To this Faculty also belongs the Lectureship on Diseases of the Eye.

Waltonian Medical Lectureship.—Founded in 1788 by the Rev. Dr. William Walton, of Upton, in the county of Huntingdon, who bequeathed to the Senate for its support the sum of £1000, which has been increased by subsequent accumulations to £2250.

Naval Architecture and Marine Engineering.

Lectures on *Ship Building* comprise: Fundamental Theorems, Operation of Ships in Work at Sea, Elements from which excellence arises, Principles and Practice used in Designing Ships for different Services and Speeds, Practical Operations in Ship Building, Materials used in the Construction of Ships, Manner in which Scantlings of the Parts of Ships are assigned, Measurement of Ships, &c. Lectures on *Marine Engineering* comprise: The Steam Engine and its Past Progress, the Marine Steam Engine, Mechanical Theorems involved in the Operation of the Steam Engine, Theorems regarding Heat and its Work, Action of the Marine Steam Engine in Work at Sea, Elements from which excellence arises, Mode of Measuring the Resultant Effect of the Steam Engine, Modes by which the Resultant Effect is used in the Propulsion of Ships, Practical Operations in the Building of Steam Engines, Materials used in the Construction of Steam Engines,

Manner in which the Dimensions of the Parts are assigned in Practice, &c. *Fee* for the course, £2 2s.

Graduation in the Several Faculties.

REGULATIONS FOR GRANTING DEGREES.—1. *Graduation in Arts.*—The regulations for graduation in this Faculy are:

I. The course of study necessary for the degree of Master of Arts extends over four winter sessions, and includes attendance for not less than two sessions on the classes of Humanity, Greek, and Mathematics respectively, and attendance for not less than one session on the classes of Logic, Moral Philosophy, and Natural Philosophy respectively, and also attendance on a course of English Literature; but any student who, at the time of his entrance to the University, shall satisfy the professors in the Faculty of Arts, on examination, that he is qualified to attend the higher classes of Latin, Greek, and Mathematics, or any of them, is admitted to such higher class or classes, without having previously attended the first or junior class or classes in the same department or departments; and in the case of students who are, after such examination, admitted to the higher Greek and Latin classes, the course of study for the degree of Master of Arts may be completed within three winter sessions instead of four.

The attention of students about to pursue the course of study for the degree of Master of Arts is called to the following regulations, adopted by the Senate:

1. Attendance on the qualifying course of Natural Philosophy for the degree of M.A. shall be subsequent to the completion of the qualifying course of Mathematics.

2. Two sessions of the lowest class of Humanity, or Greek, or Mathematics, do not constitute two sessions of one of these classes within the meaning of Ordinance No. 14.

3. A student found qualified at the preliminary examination to attend the senior class of Humanity, or Greek, or Mathematics, must attend such senior class in order to qualify for the degree without more than one session's attendance on such class.

It is strongly recommended that students prepare themselves to attend the upper division of the junior class of Mathematics in the first or second session of their course of study for the degree.

4. To qualify for the Arts degree, the Logic Class and the Moral Philosophy Class must be attended in separate sessions, the Logic Class being taken first.

II. In pursuing the course of study for the degree of Master of Arts, no student is permitted to pass from the junior to a higher class in any department, unless the professor is satisfied of his fitness to enter the higher class.

III. Any student who has completed the required attendance on the Latin and Greek classes may be examined on those subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course; and, in like manner, any student who has completed the

required attendance on the classes of Logic and Moral Philosophy, and course of English Literature, may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course; and, in like manner, any student who has completed the required attendance on the classes of Mathematics and Natural Philosophy may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course; and, if such student shall satisfy the examiners, when so examined in Latin and Greek, or in Logic, Moral Philosophy, and English Literature, or in Mathematics and Natural Philosophy, he is entitled to receive from them a certificate to that effect, and he is not again examined on the same subjects as a condition of his taking the degree of Master of Arts.

IV. Students who have passed satisfactorily an examination or examinations on the several subjects embraced in the prescribed course of study are entitled forthwith to receive the degree of Master of Arts without honours; but they may, before taking a degree, offer themselves for farther examination, with a view to graduation with Honours; provided always that any student who desires to offer himself for examination with a view to graduation with Honours in any one or more departments may proceed to such examination without having previously passed the examination in such department or departments for the degree of Master of Arts without honours; and if such student, in the opinion of the examiners, fails to attain the standard for honours in any department, but attains to the standard of the examination for graduation without honours, he shall be held to have passed in that department for the degree of Master of Arts without honours; but if in any such department he fails to attain to the standard of the examination for graduation without honours, he shall not be entitled, until he shall have passed in that department, to the degree of Master of Arts:* Provided, also, that no person shall be admitted to examination for Honours after he has ceased to be a matriculated student in attendance on a class or classes in the University for more than one winter session, unless he has been prevented from offering himself by ill-health, or other sufficient cause.†

V. There are four departments, in any one or more of which candidates for graduation with Honours may offer themselves for examination, viz.: (1) Classical Literature; (2) Mental Philosophy, including Logic, Metaphysics, and Moral Philosophy; (3) Mathematics, including pure Mathematics and Natural Philosophy; and (4) Natural Science, including Botany, Geology, Zoology, and Chemistry.

* The above change in the ordinance regulating the examination for graduation with Honours was approved by her Majesty in Council, June 4th, 1870. By minute of Senate, of date Nov. 27, 1872, with reference to this change in the ordinance, a student is allowed to go in for honours in any department, whether or not he has completed his curriculum, provided that he has sufficiently attended the classes in the department in which he offers himself; but no certificate of passing with Honours is given till the degree is conferred.

† By minute of date 28th November, 1872, the Senate resolved that the power conferred on them of dispensing with the above regulation "will not be exercised except in the case of the applicant having been precluded from attendance by ill-health, or very peculiar circumstances, quite beyond the applicant's control; attendance at another university not to be considered such."

VI. In each of the first three of the above-mentioned departments—viz., in Classical Literature, in Mental Philosophy, and in Mathematics—there are two grades of honour, denominated respectively the First Class and the Second Class; but in the department of Natural Science there is one class of Honours only; and the names of the candidates entitled to honours in each class, in the several departments, are arranged, when publicly announced, in alphabetical order.

VII. It is in the power of any student, who has given attendance during one or more sessions on the course of study in any other Scottish University, to complete his course of study, and proceed to the degree of M.A. in this University: Provided always that every such student shall produce, to the satisfaction of the Senatus Academicus of this University, testimonials of his attendance at the former university, and shall be examined in all the departments necessary for the degree of Master of Arts by the examiners of this University: Provided, also, that no student shall be admitted to a degree in this University unless he has given attendance in this university during the last two sessions of his course.

VIII. The degree of Master of Arts is in no case conferred except on persons who have complied with the conditions hereinbefore set forth, and is in no case conferred *honoris causa tantum*.

IX. Every student who, previous to the commencement of session 1861-62, had completed a part of his course with a view to graduation in Arts, under regulations in force at the time, and who shall hereafter complete his course of study in conformity with such regulations, may become a candidate for the degree of Master of Arts without complying with the present regulations, so far as they relate to the course of study for that degree, provided he pass the examination or examinations required by the present regulations.

X. Each candidate for the degree of Master of Arts is required to pay a *fee* of £1 1s. in respect of each of the three departments of the examination for graduation without honours; each such fee of £1 1s. being payable at the time at which the candidate comes forward to be examined in that department in respect of which it is payable; and no further fee than the sum of £3 3s. is payable by any candidate in respect of examination for, or admission to, the said degree, whether with or without honours.

Certificate of Literate in Arts.—The following are the regulations for granting this certificate:

1. The certificate of Literate in Arts is open to all persons who have been public students in the Faculty of Arts for not less than two sessions, and who during that time have given attendance at not less than five of the classes included in the course of study for the M.A. degree.

2. No student is permitted, with a view to the certificate of Literate in Arts, to reckon attendance on more than two of the classes included in any one of the three departments of the Arts course, i.e., Classical Literature, Mental Philosophy, and Mathematics.

3. The examination for the certificate may be taken at one, two, or three periods, at the option of the candidate, and either in April or October; but in no case can the examinations included in any one department be separated from each other. Candidates presenting more than one subject included in one department must pass in *both* at the same time.

4. The examinations and standard of proficiency required for the said certificate are, in respect of the classes attended, the same as those demanded in the subjects belonging to the same classes for the M.A. degree; and the examination papers will be the same as those set in the corresponding subjects for that degree.

5. When all the subjects are taken at one examination the *fee* is £2 2s.; when the examination is divided, the fee is £1 1s. for the examination in the department first taken, and £1 1s. for that taken next; but no fee paid with a view to the said Certificate shall be accepted as *pro tanto* payment towards the fee exigible for the M.A. degree.

6. Not less than three of the five classes constituting the attendance required for the certificate, and in all cases the last year of the course, must have been taken in the University of Glasgow. All the examinations must be passed in this University.

7. The certificate of Literate in Arts is not open to students whose qualifications for the certificate are entirely of a date anterior to April, 1880.

Subjects of Examination for the Certificate of Literate in Arts.—*Latin*: Selected books, with translations from English into Latin, and questions on Grammar, History, and Antiquities.* Moderate proficiency in Latin Prose Composition is required. *Greek*: Selected books, with questions as above. *Logic*: The Professor's Lectures, and Whately's Logic, books ii. and iii. *Moral Philosophy*: The subjects discussed in the Professor's Lectures—*see* under FACULTY OF ARTS. *English Literature*: Lectures of the Professor. *Mathematics*: Euclid, first six books; Algebra, including quadratic equations, progressions, and binomial theorem for positive integers; Plane Trigonometry, as far as the solution of triangles by the aid of logarithmic tables. *Natural Philosophy*: Examination on the subjects explained in the class; on the Elements of Statics and Dynamics, with the solution of problems not requiring the Differential or Integral Calculus; Experimental Science, including Sound, Light, Heat, Electricity, and Magnetism; Galbraith and Haughton's Astronomy; Thomson's Lectures on Navigation; Thomson and Tait's Outlines of Dynamics.

Preliminary Examinations in Arts.—The subjects of the Preliminary examinations in the different departments are as follows: *Latin and Greek*: Easy passages to translate from Latin and Greek Authors;

* *Notice.*—Candidates must bear in mind that a knowledge of the matter of the Historical books they profess is as indispensable as a knowledge of the text.

Translation from English into Latin; Simple Questions in Grammar and History. *Mathematics*: First six books of Euclid; Plane Trigonometry; Algebra, including quadratic equations. [The Preliminary examination in Latin, Greek, and Mathematics will be combined with the examination for the Competition Bursaries.] The attention of students is called specially to the following points: 1. The Preliminary examinations are in every case voluntary. 2. No student can offer himself for a Preliminary examination except when entering the University for the first time. 3. A student who passes the Preliminary examinations in Greek and Latin may complete the course of study required for the degree of Master of Arts in three sessions. 4. A student who passes the Preliminary examination, in one or more departments, is entitled to enter the senior class or classes in the department or departments in which he passes, and may qualify himself for graduation in Arts by attending such senior class or classes for one session, without attending the junior class or classes in the department or departments in which he passes. Names of candidates to be given in to the Assistant Clerk of Senate not later than October 21st.

2. *Graduation in Science.—Bachelor of Science.*—The Senate, with the approval of the University Court, have instituted the degree of Bachelor of Science, with three alternative courses of study. The courses of study in the several departments are as follows: A. *In Biological Science* — Any four of these five: 1. Chemistry; 2. Anatomy; 3. Physiology; 4. Zoology (including Comparative Anatomy); 5. Botany. And four of the classes in the Arts Curriculum.* B. *In Geological Science*: 1. Geology; 2. Chemistry; 3. Zoology (including Comparative Anotomy); 4. Natural Philosophy. And any four of the classes in the Arts curriculum: provided always that, in the event of a student taking Geodesy in conjunction with any University class of not less than twenty-five lectures, he shall be allowed to dispense with one of the Arts classes. C. *In Engineering Science*: 1. Mathematics (one or two sessions, according to proficiency displayed); 2. Natural Philosophy (one or two); 3. Inorganic Chemistry (one); 4. Geology (one); 5. Civil Engineering (two). And any two of the classes in the Arts curriculum except Mathematics and Natural Philosophy: provided always that in the event of a student taking Geodesy in conjunction with the Practical course in Civil Engineering, or any other University class of not less than twenty-five lectures, he shall be allowed to dispense with one of the Arts classes.

* i.e., Attendance for the session on any four of the following seven classes—viz., Latin, Greek, Logic, Moral Philosophy, English Literature, Mathematics, Natural Philosophy.

The following are the General Regulations for the degree of Bachelor of Science:—

1. The examinations in those subjects which are taken from the curriculum of Arts shall be the same, and subject to the same regulations, as the examination in those subjects for the degree of M.A.

2. No student shall present himself for examination in any subject without having attended a class on that subject in a university; but students may present themselves for examination in any one or more of the subjects so soon as they have attended the requisite classes. No student shall be admitted to a degree in Science unless he shall have given attendance in this University during the last two sessions of his course, nor unless he has attended the half at least of his course in this University.

3. No special certificate shall be given to students who have passed examinations in subjects for the degree in Science, but a certified list of successful candidates shall be published after each examination, and shall be copied into a book kept for the purpose by the Assistant Clerk of Senate. Both copies of the list shall be signed by the examiners.

4. The *fee* for the degree in Science shall be £3 3s., it being provided that, if any candidate shall present himself for examination in the different subjects at different periods, he shall pay £1 1s. in each session in which he is examined, till he has paid £3 3s.

5. Students who commenced their course for a certificate in Engineering Science before session 1871-72, may be granted a degree on examination in all the appointed subjects, without attendance on any class but those requisite for the certificate in Engineering Science.

6. Examinations for the degree of M.A. will not be held as available for the degree of B.Sc., unless passed by the student as a candidate for that degree; but examinations for the degree of M.A. passed previously to 1st January, 1874, will be accepted for the degree of B.Sc. on the candidate paying the fees for examination for that degree over and above any fees he may have paid as a candidate for the degree of M.A.

7. Honours in the subjects taken from the Faculty of Arts shall be given to graduates in Science only on the same curriculum and examination as to graduates in Arts.

Subjects of Examination. — A. *Biological Science.* — *Chemistry*: General Principles of Organic Chemistry; Classification of Organic Substances, and Chemistry of Blood, Bile, and Urine. *Anatomy*: Descriptive Anatomy and Histology. *Physiology*: A general knowledge of the subject as treated, *e.g.*, in M'Kendrick's Outlines of Physiology, and special knowledge of some part of the subject to be announced from time to time in the "Calendar." Candidates will also be subjected to a practical examination, in the Laboratory, on Histology, the Chemistry of Physiological processes, and the use of Physiological apparatus. *Zoology and Comparative Anatomy*: A

general knowledge of the Principles of Zoological Classification, with a more detailed knowledge of certain parts of the subject to be announced from time to time. *Botany*: Morphology, Physiology, and Systematic Botany; the last restricted to the General Principles of Classification, and to British Natural Orders. The candidate may be asked to describe plants set before him, and to refer them to their proper places in the Vegetable Kingdom.

B. *Geological Science. — Geology*: Lithology and Stratigraphy; Palæontology, and the conditions on which climatal changes depend. *Chemistry*: The General Principles of the Science, including the preparation, properties, and chief compounds of the common non-metallic and metallic elements; and in special the Chemistry of Rock Formations and Mineralogy. *Zoology*: Principles of Classification, and a more detailed knowledge of certain parts of the subject, to be announced from time to time. Candidates will be examined in these three subjects by the aid of specimens. *Natural Philosophy*: Students will be required to show proficiency equal to that which is required for the degree of M.A. The departmental Certificate in Mathematics for the degree of M.A. frees the candidate from this part of the examination, but he must pay the additional fee.

C. *Engineering Science.—Mathematics*: The subjects of examination for Second Class Honours for the degree in Arts. *Natural Philosophy*: Thomson and Tait's Elementary Treatise on Natural Philosophy; portions of Maxwell or Balfour Stewart on Heat; Central Forces. Candidates may profess higher subjects. *Chemistry*: The General Principles of the Science, including the preparation, properties, and chief compounds of the common non-metallic and metallic elements, and in special the Metallurgy of Iron, Copper, Lead, Tin, and Zinc; the Chemistry of building materials, and of water and atmospheric air. *Geology*: Lithology, Stratigraphy; Coal Mining and Geological Surveying. Besides the text books already mentioned, Smyth's "Coal Mining;" Spon's "Well-boring and Sinking." *Civil Engineering*: The subjects mentioned for the two courses of the Professor of Engineering. *Geodesy*: Theory of Geodesical Instruments; Methods of determining Local Time; Longitudes, Latitudes and Azimuths; Measurement of Base Lines; Principles of Triangulation; Measurement of Arcs of the Meridian.

The Engineering examinations for the degree of B.Sc. in Engineering Science may commence on or after the 24th of March in each year. The examination in the subjects for the degree of B.Sc. admitting of it, shall be both practical and oral as well as in writing.

3. *Graduation in Medicine.*—Three Medical degrees are conferred by this University—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.), all of which are recognised by the Medical Act as qualifying for practice throughout the British dominions, and for admission to the Army, Navy, and Public Medical Service. The degree of Bachelor of Medicine may be obtained by candidates of the age of twenty-one years who have complied with the regulations as to Education and Examination. The degree of Master in Surgery is conferred only upon those who at the same time obtain the Bachelorship of Medicine; and the degree of Doctor of Medicine may be conferred on candidates of not less than twenty-four years of age who have obtained the Bachelorship two or more years previously, and have fulfilled certain conditions. The following rules and directions apply more immediately to the *Bachelorship of Medicine*, which must precede either of the other degrees.

A.—*Examination of Medical Students in General Education and Registration by the Medical Council.*—The candidate for the Bachelorship of Medicine must have been registered in the books of the General Medical Council at least four years prior to the date of his graduation. In order to be so registered he must transmit to Dr. Inglis, the Scottish Branch Registrar, 33, Albany-street, Edinburgh, together with a printed form of application (which may be obtained from Mr. Moir, the Assistant-Clerk of Senate), a certificate of having passed a satisfactory Preliminary examination in English, Latin, Arithmetic, Euclid, and Algebra, along with one optional subject, as French, or German, or Greek, or Mechanics, or Natural Philosophy. The possession of a degree in Arts, not being an honorary degree, exempts from examination in General Education, provided that it has been conferred by a British University, or by such Foreign and Colonial Universities as shall have been recognised by the General Medical Council. The examination in General Education may be passed either in this University or at any University or Board of which the examinations are recognised by the General Medical Council as entitling to registration. But while a certificate of having passed any recognised Preliminary examination entitles to registration in the books of the General Medical Council, the University only accepts these examinations *pro tanto*, and exacts examination in every case on such subjects required by the regulations of the University as are not embraced in the certificates presented from other Examining Boards, or which, though included therein, are not of similar extent to the same subjects as prescribed by the University. In such cases this examination required by the University must be passed by the candidates before admission to their First Professional examina-

tion. This registration in the books of the Medical Council, which is imperative on candidates for any legal qualification to practice whatsoever, is quite distinct from Matriculation or other registration of students in the books of the University.

In addition to the above-mentioned Preliminary examination, candidates for the Bachelorship are required to undergo, previous to their First Professional examination (and, it is recommended, as far as possible, previous to the commencement of professional study), an examination in two of the following subjects, to be selected by the candidate—viz., Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy. Candidates are further advised to appear at as early a period as possible for examination on the subjects enjoined in Part III.

The first duty, then, of those intending to enter the Medical profession is to prepare themselves for the Preliminary examination in General Education; and, unless in exceptional circumstances of great proficiency in the subjects of that examination, students are recommended not to enter upon professional study before the age of seventeen years; the minimum professional curriculum of four years will thus occupy the period till the age of twenty-one years, the earliest at which a legal qualification to practice can be obtained.

The following is a more detailed notice of the subjects of the examination in General Education referred to above:

I. *First, or Preliminary Part.*—The candidate must pass in all the subjects of this division before registration with the Branch Registrar of the Medical Council: 1 (A). *English*: (1) Writing correctly a passage to dictation; (2) Composition of a short essay on a given theme; (3) Questions on Grammar, with analysis of sentences and the derivation and meaning of some common English words; (4) English History from 1603 to 1688; (5) Geography of the British Isles. 2 (B). *Latin*: Translation of passages from the second book of the Æneid of Virgil, and Sallust de Bello Jugurthino, chap. i.—l.; Translation of passages from works not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions on Grammar and construction. 3 (C). *Arithmetic*: The Common Rules, including vulgar and decimal fractions. 4 (C). *Elements of Mathematics*: The first three books of Euclid; Algebra as far as simple equations. 5 (D). *Elements of Dynamics* (*Mechanics*)*: Elementary Kinematics, Statics,

* For the purpose of Registration, any of the subjects under *II. Second Part* may be substituted for Mechanics, in which case Mechanics must be passed before the First Professional examination.

Kinetics, and Hydrostatics. *Text books*: Bottomley's "Dynamics" (Collins' Series); Blaikie's "Elements of Dynamics."

II. *Second Part.*—The candidate must pass in at least two of the following subjects, to be selected by himself, before he can be admitted to the First Professional examination: 1 (E). *Greek*: Memorabilia of Xenophon, book i., and the Gospel according to St. John; Translation of passages from works not prescribed, and of English passages into Greek—the principal Greek words being supplied; Questions on Grammar. 2. *French*: Montesquieu's Considerations sur les causes de la grandeur des Romains, et de leur Decadence; Translation and exercises as in the Latin and Greek. 3. *German*: Schiller's Maria Stuart; Translation and exercises as in the other languages. 4 (C). *Higher Mathematics*: Euclid, books i. to vi.; Algebra, including quadratic equations, and the Rudiments of Trigonometry. 5 (D). *Natural Philosophy*: Such a knowledge of the principles of Natural Philosophy as may be obtained from Bottomley's Handbook (Collins), and Balfour Stewart's Elementary Lessons in Physics. 6 (F). *Logic*: Jevons' Elementary Lessons on Logic. 7 (G). *Moral Philosophy*: Dr. Fleming's Manual, part i. A certificate of having passed, at the examinations for the degree of M.A., or B.Sc., in English, Latin, Mathematics, Natural Philosophy, Greek, Logic, or Moral Philosophy, will be accepted instead of examination in the subjects marked A, B, C, D, E, F, G, respectively.

III. *Third Part.*—The candidate for the degree of M.D., if not a graduate in Arts, must have passed an examination in three of the subjects enumerated above in II., *Second Part*, of which one must be Greek, another either Logic or Moral Philosophy, and the third is left to the option of the candidate.

B.—*Professional Education.*—1. *Duration and Constitution of the Curriculum.*—The professional curriculum is of four years' duration; the medical session of each year or *annus medicus* being constituted by attendance on two courses of not less than 100 lectures each, or on one such course with two or three months' courses of not less than 50 lectures each. But in the case of the clinical courses it is sufficient that the lectures be given twice a week during the prescribed period. Of this curriculum, if not passed wholly at the University of Glasgow, two years must be constituted by attendance on courses at a university entitled to grant degrees in Medicine; and one of these years at least must be at the University of Glasgow. If the remaining years are not passed at a recognised university, attendance during at least six winter months on the Medical and Surgical Practice of a General Hospital which accommodates not fewer than 80 patients, with a course

of Practical Anatomy during the same period, may be reckoned one *annus medicus*; while another may be constituted by attendance for the requisite period on the lectures of teachers of Medicine in the Hospital Schools of London, or in the School of the College of Surgeons, Dublin, or of such private teachers as may be recognised by the University Court with the consent of the Chancellor of the University. But attendance on lectures by such teachers is not recognised to the extent of more than four of the departments of Medical Study required for the curriculum. For further particulars, see "Guide to the Medical Profession."*

4.—*Bachelor of Laws* (*LL.B.*) *and Bachelor of Law* (*B.L*).—The conditions on which the degree of LL.B. is now conferred are regulated by Ordinance of the Universities Commissioners No. 75, the principal provisions of which are the following:

I. No one shall hereafter be admitted as a candidate for the degree unless he be a graduate in Arts of a recognised university.

II. The course of study in Law necessary for the degree of Bachelor of Laws shall extend over three academical years, and shall include attendance on a distinct course in each of the six following departments, viz.: (1) Civil Law, (2) Law of Scotland, and (3) Conveyancing, during courses of not less than eighty lectures each; (4) Public Law, (5) Constitutional Law and History, and (6) Medical Jurisprudence, during courses of not less than forty lectures each.

III. No one shall be admitted as a candidate for this degree in any university unless two at least of the three academical years of his course of study in Law shall have been in such university.

IV. Candidates for the degree of Bachelor of Laws shall be examined, both in writing and *viva voce*, on each of the six departments of Law above specified.

V. The examiners, in judging of the qualifications of candidates, shall have special regard to their acquirements in the two departments of Public Law and Constitutional Law and History.

VI. The examiners for degrees in Law in each university shall be six in number, and there shall always be one examiner specially qualified for each one of the six departments above specified; and where the professors of the Faculty of Law in any university do not furnish the requisite number of examiners duly qualified, the number shall be made up by the appointment of additional examiners by the University Court; provided always that no person shall be appointed an additional examiner in any university unless he be a professor in the Faculty of Law in a Scottish University, or shall have obtained the degree of Bachelor of Laws, in accordance with the provisions of this ordinance.

* "A Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

VII. Each candidate for the degree of Bachelor of Laws shall pay a *fee* of £5 5s. in respect of his examination for the degree.

The following regulations for the degree of Bachelor of Law (B.L.) were sanctioned by Her Majesty, by order in Council, dated 6th August, 1874.

VIII. Besides the degree in Law specified in the said ordinance, there shall in future be in the University of Glasgow a second degree in Law granted after examination, namely, the degree of Bachelor of Law (B.L.)

IX. No one shall be admitted to examination as a candidate for the degree of Bachelor of Law in the University of Glasgow unless he be a graduate in Arts, qualified as prescribed in section I. (*supra*), or unless he shall have passed a satisfactory examination in Latin and in any three of the following subjects (Logic or Mathematics being always one of the three), viz.: (*a*) Greek, with the alternative of French or German, (*b*) Logic, (*c*) Moral Philosophy, (*d*) Mathematics, (*e*) Natural Philosophy, and (*f*) English Literature; and further, shall have studied, during at least two academical years, two or more of the above branches, in one or more of the universities mentioned in section I. The examinations shall be conducted by examiners in Arts, together with some of the Law Examiners.

X. The course of study in Law necessary for the degree of Bachelor of Law in the University of Glasgow shall extend over at least two academical years, and shall include attendance on a distinct course, as specified in section II., in each of the three departments of Civil Law, Law of Scotland, and Conveyancing, and in any one of the other three departments of Law mentioned in that section: Provided always that in lieu of Civil Law, or one of the last-mentioned three of Law, attendance on a distinct course of Moral Philosophy shall be admitted as sufficient, or, in the event of Moral Philosophy having been selected by a candidate as one of the three optional subjects of Preliminary examination, then attendance on a distinct course of Political Economy shall be admitted in lieu of Civil Law or one of the said other three departments of Law. No one shall be admitted to examination as a candidate for the said degree unless two academical years of his course of study in Law shall have been in the University of Glasgow. The candidates shall be examined in each of the departments in which they shall have given attendance as herein required.

XI. The examiners for the degree of B.L. in the University of Glasgow shall be the Professors of the Faculty of Law, together with two additional examiners appointed by the University Court from among graduates in Law of any of the universities of Scotland, provided always that for six years after the approval of this alteration in the ordinance by Her Majesty in Council, any one shall be eligible as examiner who is a member of the General Council of any of the universities of Scotland. Each of such additional examiners shall hold office for the term of three years.

XII. The fee to be paid by each candidate for the degree of Bachelor of Law in the University of Glasgow shall be £3 3s.

XIII. Any candidate who before the approval of the present alteration by her

Majesty in Council may, with a view to graduation in the University, have passed an examination in any of the subjects hereby required for the degree of B.L., shall be entitled to reckon such examination as an examination in the same subject or subjects for the purpose of the said degree.

By regulation of the Faculty of Advocates, any one who has obtained the degree of LL.B. from a Scottish university is held qualified in General Scholarship and Law with a view to admission to the Bar, without examination or other evidence of such qualification.

By the Law Agents Act, 36 and 37 Vic., c. 63, the holder of a degree in Law or in Arts of a University in Great Britain or Ireland, granted after examination, is qualified to apply for admission as a Law Agent after an apprenticeship of three years, instead of five, as required in the ordinary case; and by Act of Sederunt of 20th July, 1878, any applicant who holds the degree of LL.B. or of B.L. of any Scottish university is exempted from any examination in Law before the examiners of Law Agents, excepting only on Forms of Process, Civil and Criminal.

The examination in the Arts subjects under section IX. will be the same as that for the degree of M.A.

Examinations in Law subjects for degrees in Law are held twice a year—viz., in April, and at the end of October or beginning of November.

The examinations in the Arts subjects are held at the same periods as the corresponding examinations for M.A.; those in French and German at the same periods as the Preliminary examinations of Medical Students in these subjects.

Names of candidates to be given in, with the examination fees, to the Assistant Clerk of Senate on or before the 10th of March or the 1st of October.

5. *Bachelor of Divinity.*—This degree, having been revived in the University by authority of the University Court and Senatus Academicus, is conferred at the close of each session on such qualified candidates as shall satisfy the members of the Divinity Faculty of their proficiency in the departments of (1) Hebrew and Biblical Criticism; (2) Divinity and Church History. The following books may be consulted: 1. *Divinity*: "Mozley on Miracles;" Steinmeyer, "The Miracles of our Lord;" Thomasius, "Christi Person und Werk;" Dorner, "Doctrine of the Person of Christ;" Gess, "Lehre von der Person Christi;" Bruce, "The Humiliation of Christ;" Halley, "The Sacraments," Part ii.; Ebrard, "Dogma vom heiligen Abendmahl;" Martensen, "Christian Dogmatics;" Oosterzee, "Christian Dogmatics;" Weiss, "Biblische Theologie des Neuen Testamentes;" Schmid's "Biblical Theology;" Reuss, "History of Christian Theology in the Apostolic Age;" Pfleiderer, "Paulinism." 2. *Church History*:

The Greek Ecclesiastical Historians; Hefele's "History of Councils of the Church;" Beugnot's "Destruction du Paganisme en Occident;" Chastel's "Histoire de la Destruction du Paganisme dans l'Empire d'Orient;" Gibbon's "Decline and Fall of the Roman Empire;" De Broglie's "L'Eglise et l'Empire au 4me Siècle." 3. *Hebrew*: "Zechariah and his Prophecies," the Bampton Lectures for 1878, by C. H. H. Wright, with other works therein referred to; the Commentaries of Delitsch, Perowne and Lowe and Jennings on the Psalms; Ewald's Syntax (Clark's translation). 4. *Biblical Criticism*: (1) The relative Commentaries of Meyer, De Wette, or Alford; Bleek's "Synoptische Erklärung der drei ersten Evangelien;" (2) Davidson's "Sacred Hermeneutics" (1843), or his "Treatise on Interpretation in Horne's Introduction," vol. ii.; Ernesti, "Institutio Interpretis;" Immer, "Hermeneutik des Neuen Testamentes." All graduates in Arts of any of the universities of Scotland or of England, or of Ireland, or of a Colonial university whose degrees shall, for this purpose, have been specially recognised by the University Court, who have studied at this University during at least two sessions, and "who have gone through a due course of Theological training, whether in this University or in any other theological school in Scotland or England," may become candidates for the degree. Students who have completed the second year of their Divinity studies, subsequent to the termination of their course in Arts, may present themselves for examination in Hebrew and Biblical Criticism. Candidates must make application by letter to the Professor of Divinity not later than November 1st or April 1st respectively, accompanying their letter with a statement of their course of study as students of Divinity, and with the necessary certificates. The *fee* for the degree is £3 3s.

6. *Doctor of Divinity*.—This degree is now conferred in accordance with the following regulations, which were adopted by the Senate, April 28th, 1869, and March 9th, 1882:

I. A Bachelor of Divinity of this University of fifteen years' standing may proceed to the degree of D.D. after performance of the following exercises to the approval of the Senate: 1. He shall compose a thesis on a Theological subject approved by the Professor of Divinity, and shall deposit with the Clerk of Senate fifty printed copies of the thesis. 2. He shall preach a University sermon in a place and at a time to be appointed by the Vice-Chancellor and the Professor of Divinity. The sermon may be preached at any time after he is a B.D. of five years' standing.

II. A Bachelor of Divinity of this University of eight years' standing may proceed to the degree of D.D. by passing a higher examination in two of the departments of the Theological curriculum, the Senate determining on the report

of the examiners whether the degree of D.D. shall be conferred. The Senate may dispense with this examination in the case of a Bachelor of Divinity of whom the Theological Faculty shall report that he has published a work of merit in Theological Science.

III. A graduate in Arts or member of the General Council, who completed his theological course before the revival of the degree of B.D., may proceed to the degree of D.D. in the same way as a B.D. of eight years' standing under Regulation II., or as a B.D. of fifteen years' standing under Regulation I., his standing being reckoned from the completion of his theological course.

IV. The University dues for the degree of D.D. shall be, as heretofore, £20; under deduction of the dues previously paid on examination for the degrees of M.A. and B.D.

7. *Doctor of Laws* (*LL.D*).—The following resolutions regulating the procedure of the Senate in conferring the honorary degree of LL.D. were agreed to, 9th March, 1882:

1. Proposals for conferring the degree of LL.D. shall be brought before the Senate at the first meeting in November, or the first meeting in March.

2. At the commencement of every session a committee shall be appointed, to be called the Committee on the Degree of LL.D., consisting of the Principal, two Professors from each of the Faculties of Arts and Law, and one Professor from each of the Faculties of Medicine and Theology. To this committee all proposals to confer this degree shall be remitted.

3. It shall be the duty of this Committee to consider the proposals brought before the Senate, and to submit to the Senate, in writing, a statement of the grounds on which, in any case, their recommendation to confer the degree is founded.

4. To enable the Committee to fulfil the third regulation, the proposer, along with two other members of the Senate, shall fill up a schedule showing in the case of the person nominated: (*a*) Whether he is an alumnus of this or any other University, and whether he holds any academical degree; (*b*) Whether he is the author of any work of acknowledged merit, or has otherwise contributed to the progress of learning and science: (*c*) and, in general, whether his character, profession, or position in society are such as to warrant the conferring of the proposed distinction.

5. No resolution to confer the degree of LL.D. shall be moved in the Senate until the meeting after that to which the Committee's recommendation is presented.

ACADEMIC DRESS.—*Graduates of the University.*—On ceremonial occasions the graduates are expected to appear in the gown and hood proper to their degrees. The ordinary gowns to be worn by graduates of the University of Glasgow are of black silk or stuff, of similar shapes to those appropriated to the corresponding degrees in the other British

Universities.* The hoods for the different degrees are as follows: B.A., black silk, bordered inside with red purple silk (colour of bell heather —*Erica cinerea*); M.A., black silk, lined with red purple silk; B.Sc., black silk, lined with gold coloured silk (colour of whin blossom—*Ulex Europæa*); D.Sc., black velvet, lined with gold coloured silk; B.L., black silk, bordered inside with Venetian red silk (colour of clove carnations); LL.B., black silk, lined with Venetian red silk; LL.D., black velvet, lined with Venetian red silk; M.B. and C.M., black cloth, lined with scarlet silk; M.D., black silk, lined with scarlet silk; B.D., black silk, bordered with black velvet, lined with red purple silk; D.D., black velvet, lined with black silk, or (if the graduate be Master of Arts) with red purple silk.

Undergraduates.—The General Council of this University having requested the University Court to recommend to the Senate the propriety of requiring the students to conform to the ancient practice of this University as to academic dress; and the University Court having remitted the subject to the determination of the Senate, with an expression of regret that the academical dress formerly worn by the Arts students has of late years been laid aside, the Senate has given notice that students in Arts are required to wear the gown on public occasions, and in their classes, unless for a reason satisfactory to the Professor of the class. The Senate further require that, in future, all candidates for graduation in Arts shall appear in their gowns at the examinations and at the ceremony of Graduation. While this notice does not apply to students not in the Faculty of Arts, all students in the University are entitled to wear the Red Gown.

The propriety of wearing an Academical Cap along with the Gown having been brought under the notice of the Senate by a memorial from the students, the following resolution was adopted, April 25th, 1871: "The Senate, fully recognising the propriety of a suitable academic cap being worn along with the gown, recommend that the Trencher Cap be so worn, but desire that it be not worn without the Gown."†

Ceremony of Graduation.—The following are the regulations adopted by the Senate: All degrees, honorary or gained by examination, shall be publicly conferred, except in special cases, to be decided by the Senate. Candidates for graduation in Arts are required to appear in students' red gowns; candidates for graduation in other faculties in

* The robemakers to the University, Messrs. Dawson and MacNicol, have standard patterns of the gowns, which, it may be stated for the information of those at a distance, are of the same shape with the ordinary (or undress) gowns of the corresponding degrees at Cambridge.

† Messrs. Dawson and MacNicol supply caps. Gowns and caps may be obtained from the Janitor at the University at the makers' prices.

black gowns; those who are already graduates, in the costume proper to their previous degree.

Bursaries, Scholarships and Prizes.

The inducements to study and the rewards of acquired learning in this University are numerous and varied. A great part of the endowments for these purposes are, however, devoted to local and personal preferences; that is, the applicant must either be a native of or educated at a specified place, which is uniformly in Scotland, or must be of a particular family, or bear a given surname; or where such conditions are not absolute, what is nearly the same thing, they confer a preferential claim. To give details of this class of benefaction would be but of limited interest; and we shall, therefore, simply enumerate them, with the intimation that particulars may be obtained from the "Calendar." For the rest, it will be convenient to make categories of those emoluments which are open and those which are professional, distinguishing, however, such as, constituting independent series, cannot be otherwise classified. Where the names of the patrons or the time and place of application are not given, the information must be sought from the "Calendar."

No alumnus of the University is allowed to hold at one time more than one bursary, scholarship, or fellowship, except in cases provided for by the Regulations.

1. BURSARIES.—Bursars in the Faculty of Arts are required to attend each session two at least of the classes embraced in the curriculum for M.A. Bursars in the Faculty of Theology are required to attend the Divinity Class and any two of the three classes of Hebrew, Church History, and Biblical Criticism. In the case of bursaries in the gift of the Senate, in appointing to which "a preference" is to be given to certain names, &c., by a "preference" the Senate understand, in every instance, a preference *cæteris paribus*.

BURSARIES.

Foundation.	No. of Bursaries.	Faculty.	Approximate Annual Value of Each. £	s.	d.
Adam, James (2 close)	3	Arts	12	0	0
Adam, John*	3	Theology	15	0	0
Adamson*	1	Arts	20	0	0
Angus & Mearns Benevolent Society*	2	Arts	15	0	0
Ardkinglass	1	Arts and Theology	9	10	0
Armagh	3	Theol., Law, or Medicine.	25	0	0
Ayrshire Masonic*	1	Arts	25	0	0
Ayrshire Society*	3	Any Faculty	10	0	0
Baxter	1	Arts and Theology	8	0	0

[Those marked * are close bursaries.

BURSARIES (*continued*).

Foundation.	No. of Bursaries.	Faculty.	Approximate Annual Value of each. £	s.	d.
Biggart Memorial	10	Arts	25	0	0
Black	2	Arts	20	0	0
Black*	2	Theology	40	0	0
Blackquarry School*	1	Arts	15	0	0
Boyd*	1	Theology	11	0	0
Boyd and Sanders*	1	Theology	13	16	8
Brand	3	Arts	26	0	0
Brisbane*	1	Medicine	45	0	0
Brown	1	Arts	6	13	4
Brown or Ettles	2	Theology	20	0	0
Brown (Saltcoats)*	1	Arts	12	0	0
Browne (Ayrshire)*	2	Arts	17	10	0
Buchanan	2	Arts	18	0	0
Buchanan (Bellfield)	2	Arts and Theology	53	0	0
Celtic Society (Campbell)*	1	Any Faculty	5	0	0
Clark, John (Mile-end)	16	Arts	30	0	0
Cowan*	1	Arts	35	0	0
Craig*	1	Arts	25	0	0
Crawfurd (or Bishop's)	1	Arts	14	0	0
Davidson	2	Any Faculty	35	0	0
Denny*	4	Any Faculty	30	0	0
Dumfriesshire Society*	2	Any Faculty	15	0	0
Duncan's Bute*	2	Arts	35	0	0
Dundonald	8	Arts	40	0	0
Dundonald	6	Theology	41	2	6
Ewing, James*	4	Arts	20	0	0
Exchequer	3	Arts	10	0	0
Exchequer	3	Theology	13	6	8
Ferguson, James*	2	Theology, Law, Med., or Dept. of Eng. Science	70	0	0
Forfar	4	Arts	20	0	0
Forrest*	5	Any Faculty	22	0	0
Foundation	4	Arts	10	0	0
Fullarton, of Overton*	5	Arts	10	0	0
Gibson, John*	2	Any Faculty	20	0	0
Gilchrist*	1	Arts	8	0	0
Gilhagie	1	Theology	6	6	0
Hamilton	3	Arts	20	0	0
Hamilton	3	Theology	25	0	0
Hannay	3	Arts	15	0	0
Hastie	1	Arts	20	0	0
Hastie	2	Theology	20	0	0
Howison*	1	Arts	9	0	0
Hyndford	1	Arts	6	13	4
Jaffrey, John Ferguson	1	Arts	32	10	0
Kerr, Malcolm	1	Arts (Nat. Phil.)	18	0	0
Kerr, Malcolm	1	Med. (Chemistry)	18	0	0
Kintyre (Ker)*	1	Any Faculty	20	0	0
Lamb*	1	Arts or Theology	11	0	0
Leadbetter*	1	Arts	9	0	0

Those marked * are close bursaries.

BURSARIES (*continued*).

Foundation.	No. of Bursaries.	Faculty.	Approximate Annual Value of each. £ s. d.
Leighton*	2	Arts and Theology	9 0 0
Leyden, John	1	Arts	22 0 0
Library (Old)*	1	Theol., Law, or Med.	11 2 2½
Logan*	1	Theology	15 0 0
Logan	1	Medicine	15 0 0
Lorimer	4	Arts (Philosophy)	£25 and £18
Lorimer	4	Arts (Mathematics)	£25 and £18
Lorimer	4	Theology	£25 and £18
Lorimer	4	Medicine	£25 and £18
Lumsden*	1	Theology	15 0 0
Lusk	1	Arts	33 0 0
Macfarlane	1	Medicine	40 0 0
MacGrouther	2	Arts	£20 and £15
Maltmen*	2	Any Faculty	25 0 0
Marshall*	1	Theology	17 0 0
Marshall	1	Medicine	17 0 0
Merchants' House	1	Arts	25 0 0
Merchants' House	2	Medicine	25 0 0
Merchants' House	1	Law	25 0 0
Metcalfe	4	Arts	25 0 0
Monteith	3	Arts	16 0 0
Muir	1	Theology	40 0 0
Muir	2	Arts (Mathematics)	20 0 0
Muir	2	Arts (Civ. Eng.)	20 0 0
Notman	1	Theology	16 10 0
Orr-Ewing, Dumbartonshire	16	Arts	25 0 0
Patrick*	2	Arts	£80 and £40
Perthshire Society*	1	Arts	25 0 0
Pollock*	3	Arts	35 0 0
Rainy	2	Medicine	20 0 0
Ramsay-Walker*	2	Arts	11 0 0
Ross	1	Arts	25 0 0
Ross, John, jun	1	Divinity	40 0 0
Scott	2	Arts	25 0 0
Smith*	2	Any Faculty	9 0 0
Stewart*	4	Arts	15 0 0
Stirlingshire Society*	1	Arts	25 0 0
Struthers	1	Theology	13 6 8
Taylor*	2	Any Faculty	11 0 0
Thomson, James (Philos.)	1	Arts (Philos.)	12 0 0
Walkinshaw-Young	1	Law	18 0 0
Walton	1	Medicine	36 0 0
Williams	7	Arts and Theology	40 0 0
Wilson	1	Theology	13 6 8

Faculty of Arts.—Open Bursaries: *James Adam* (one open), for students in the gown classes, tenable for four years; *Black*, for students entering on first session; *Buchanan*, for students in Arts, tenable for three years; *John Clark* (*Mile End*), for Protestant stu-

Those marked * are close bursaries.

dents who are sons of Protestant parents and entering on first session, tenable for four years; *Crawfurd or Bishop's*, for a student in languages, four years; *Dundonald*, in Philosophy four years, in Divinity two years; *Forfar*, for students entering on first or second session, four years; *Foundation*, same conditions as "Forfar;" *Hyndford*, for a student in Philosophy, four years; *John Ferguson Jaffrey* (in Mental Philosophy), for a student entering on third session, examination in Literature and Logic, two years; *Malcolm Kerr*, one in Natural Philosophy, other in Chemistry, examination in Natural Philosophy as for M.A. with Second-class Honours, in Chemistry as for M.A. with Honours in Natural Science, three years; *John Leyden*, under the regulations of Competition Bursaries, three years; *MacGrouther*, for students entering Faculty of Arts, four years; *Ross*, four years; *Scott*, for distinguished University students, under regulations of Competition Bursaries, four years; *James Thomson* (Philosophical Entrance), for students in first or second year, best examination in Mental Philosophy or English Literature, two years.

With Professional Conditions.—Biggart Memorial, for students entering on Arts course with a view to the Ministry of the United Presbyterian Church, four years; *Brand*, for students in first or second session in Arts, with a view to the Ministry of the United Presbyterian Church, four years; *Hannay*, for young men between fourteen and nineteen years of age, about to commence their studies in the Arts classes, with a view to the Ministry in any of the Evangelical denominations in Scotland, three years; *Lusk*, for the most successful student attending the preparatory course of studies who may intend to follow out the Ministry in connection with any of the Presbyterian bodies in Scotland, three years; *Merchants' House*, for students attending the requisite classes in the prescribed Faculties, preference to sons of matriculated members of the Merchants' House, and such others as the Lord Dean and Directors may deem most deserving, in Medicine and in Arts four years, in Law three years.

Hastie Bursaries—In Arts, on the same conditions as the "Forfar;" in Theology, for Masters of Arts of any of the Scottish Universities entering on first or second year in Divinity, three years.

Lorimer Bursaries.—The following regulations have been adopted by the Senate:

1. The bursaries shall be sixteen in number—namely, eight of the annual value of £25, and eight of the annual value of £18, and shall be tenable for three years.

2. Four bursaries—viz., two at £25, and two at £18—shall be held by students of Theology, and shall be open to competition to students entering the

Divinity Hall. The second moiety of the third year's burse shall not be paid until the bursar shall have passed the examinations for the degree of B.D.

3. Four bursaries—viz., two at £25, and two at £18—shall be held by students of Medicine, and shall be open to competition to students who have attended the first session of their professional study in the University of Glasgow, and who have passed in all the seven subjects of the examination in General Education for M.B., or who possess such a degree in Arts as is recognised by the University as exempting from an examination in General Education. The subjects of examination, which shall be prescribed by the Medical Faculty, are Elementary Anatomy, Elementary Chemistry, and Botany. The second moiety of the third year's burse shall not be paid until the bursar shall have passed his Final Professional examination for the degree of M.B.

4. Four Bursaries—viz., two at £25, and two at £18—shall be open for competition to students entering on their third session of attendance at the University. Candidates shall be examined in such subjects in English Literature and Logic as may be fixed by the Senate.

The examiners shall be the Professors of English Literature, Logic, and Moral Philosophy. Each bursar must attend two classes in the Faculty of Arts. Immediately on his appointment, he must enter one or more of the classes of English Literature, Logic, and Moral Philosophy, and in the course of his tenure of his bursary must attend, besides the above classes, one or more of the higher classes in connection with the classes of Logic and Moral Philosophy. The second moiety of the third year's burse shall not be paid until the bursar shall have obtained a Certificate in the Mental Philosophy department for a degree in Arts.

5. Four bursaries—viz., two at £25, and two at £18—shall be open for competition to students entering on their third session of attendance at the University. Candidates shall be examined in such subjects in Mathematics as may be fixed by the Senate. The examiners shall be the Professors of Mathematics and Natural Philosophy. Each bursar must attend two classes in the Faculty of Arts. Immediately on his appointment he must enter the Class of Mathematics, and prosecute the course of study required for obtaining a certificate in the Mathematical department for a degree in Arts. The second moiety of the third year's burse shall not be paid until the bursar shall have obtained this certificate.

Metcalfe Bursaries.—For students entering the senior class of Mathematics, or the class of Chemistry, the bursar to attend the four classes of Civil Engineering, Senior Mathematics, Practical Astronomy, and Chemistry; two at least of these classes to be taken each year, examination in Pure Mathematics, including the Elements of Plane Trigonometry, of Mechanics, and of Theoretical Astronomy.

Muir Bursaries.—One for a student of Divinity during the last three years of his curriculum; two for advanced students in Mathematics, the period of tenure to be fixed by the Senate; and two for advanced

students of Engineering and Mechanics, the period of tenure to be fixed by the Senate. The following are the rules and regulations for these bursaries:

1. *Muir Bursary in Divinity.*—Candidates must be entering on their first session in Theology in the University, and the appointment to the bursary shall be determined by the result of the annual competitive examination for Bursaries in Theology. The competition shall be open to candidates holding a degree in Arts in any Scottish University, or who have passed their examinations in any two departments for graduation in Arts. The bursary shall be tenable for three years, but the second moiety of the third year's burse shall not be paid until the bursar shall have passed the examinations for the degree of Bachelor of Divinity.

2. *Muir Bursaries in Mathematics.*—Two in number, of which the Junior bursary shall be tenable for two years, and the Senior bursary for one year, the former being of half the annual value of the latter. The appointments shall be determined by the proficiency shown by the candidates in the earlier part of their Mathematical course, and the successful candidates shall prosecute the study of the Higher Mathematics during their tenure of the bursaries. No candidate shall be allowed to hold both bursaries at the same time. Should the Junior bursary be resigned by the bursar at the end of his first year of tenure, the Senate may make an appointment for the remainder of the period.

3. *Muir Bursaries in Civil Engineering and Mechanics.*—Two in number, and of equal value. The appointments shall be determined by the proficiency shown by the candidates in the earlier part of their Engineering course. The period of tenure for each bursary shall be the session of attendance on the Senior Class of Civil Engineering and Mechanics. Should a vacancy occur by reason of non-attendance of a selected candidate the Senate may make an appointment for the remainder of the period. No candidate shall be allowed to hold both bursaries.

4. The Senate reserve the right to withhold the bursary in any case in which a satisfactory standard has not been attained by any of the competitors.

5. Arrangements for carrying out these rules and regulations shall from time to time be made by the Senate, and notice thereof shall be published in the University Calendar.

Faculty of Theology.—Open Bursaries: *Black*, for members of the Established Church of Scotland either holding a degree in Arts in any Scottish University, or having passed their examinations in any two departments for graduation in Arts, tenable for three years; *Brown or Ettles*, for first year's students of Divinity who have passed all the examinations for the ordinary degree of M.A., with preference *cæteris paribus* to such as can speak Gaelic, three years; *Gilhagie*, for a student in Divinity, four years; *Notman*, for a student in Divinity who

shall appear in public examination to be best qualified and deserving; *John Ross, jun.*, for a student in Divinity entering on his first session in Theology, with a view of becoming a clergyman of the Established Church of Scotland, the award to be determined by the result of the annual competitive examination for Bursaries in Theology, in case of equality preference to student most in need of help, or to a native of Ayrshire, three years; *Struthers*, for an M.A. and student of Divinity, three years; *Wilson*, for an M.A. in regular attendance as a student in Theology, three years.

Faculty of Law. — Walkingshaw Young Bursary: The following regulations have been adopted:

1. The bursary shall be tenable for two years, during which the holder shall give regular attendance as a public student in the Faculty of Law in the University, to the satisfaction of the Senate.

2. All persons who, within two years previous to the time when an appointment to the bursary is made, have at an examination in Arts for the degree of B.L. passed in not fewer than two Arts subjects, or have passed a departmental examination for the degree of M.A., shall be eligible as candidates, and the Senate shall appoint that one among the candidates who in their opinion is the most distinguished. A student who passes a qualifying examination in the November of the session in which an appointment is made shall be held eligible within this rule, but one who has passed an examination in the November two years preceding such appointment, and has not passed any subsequent qualifying examination, shall not be eligible.

3. The bursary shall not be tenable along with any other bursary or scholarship in the University.

Faculty of Medicine.—Open Bursaries: *Macfarlane*, for students who have attended the first session of their professional study in the University of Glasgow, and who have passed in all the seven subjects of the examination in general education for M.B., examination at the close of the first session of professional study, and General Education to form an essential element—any surplus which may accumulate, from vacancies or otherwise, to be applied to establish a "Macfarlane Prize" in the Class of Practice of Medicine — examination, Elementary Anatomy, Elementary Chemistry, and Botany; *Rainy*, for students who have completed two years of the regular Medical curriculum at the University, and who are about to commence their third winter session, examination in October—two years; *Walton*, for students nominated by the Senate, preference to "students of the English Nation," four years.

Arts and Theology.—Open Bursaries: *Ardkinglass*, for a student found duly qualified, tenable for eight years—five in Languages and

Philosophy, and three in Divinity; *Baxter*, five years; *Buchanan* (*Bellfield*), for students pursuing a course for the Ministry of the Established Church of Scotland, tenable for the whole curriculum; *Exchequer*, tenable for six years; *Hamilton*, six years; *Williams*, for natives of South Britain promising to become preachers among the Dissenting Ministers of that country, tenable for three years.

Arts, Law, or Medicine.—Macdonald Bursaries: Open only to miners under twenty-one years of age, who have worked underground in some part of the United Kingdom, examination in General Knowledge.

Theology, Law, or Medicine.—Armagh Bursaries: For the most distinguished graduate of the year who offers himself, tenable for three years.

Any Faculty.—Monteith Bursaries: For natives of Scotland and sons of Scottish parents, examination in French and German in alternate years, tenable for three years.

2. EXHIBITIONS, FELLOWSHIPS, AND SCHOLARSHIPS:

Foundation.	No. of Scholarships, &c.	Tenable by	Approximate Annual Value of each. £	s.	d.
Black Theological	1	Masters of Arts of Scot. Univ.	140	0	0
Breadalbane	2	Do. Glas. Univ.	50	0	0
Clark, George A.	4	Do. do.	225	0	0
Clark, John (Mile-end)	8	Arts Students at close of Curric.	50	0	0
Eglinton	2	Masters of Arts of Glas. Univ.	100	0	0
Euing, William	3	Do. do.	80	0	0
Ferguson	6	Masters of Arts of Scot. Univ.	80	0	0
Findlater	1	Divinity Students of Glas. Univ.	35	0	0
Luke	1	Masters of Arts of do.	120	0	0
Metcalfe	1	Do. do.	100	0	0
Sandford	1	Greek Students, do.	19	0	0
Scott	1	Masters of Arts of do.	80	0	0
Shaw Philosophical	1	Do. Scot. Univ.	160	0	0
Snell (at Oxford)	12	Masters of Arts, &c., Glas. Univ.	110	0	0
Thomson Experimental	3	Students of Natural Philosophy	20	0	0

Snell Exhibitions.—For educating Scottish students at Oxford. Candidates must have been born in Scotland, or must be sons of fathers born in Scotland, and must "have resided as undergraduate students for two years at least in Glasgow College, or for one year in that College, and two at least in some other College in Scotland." "No candidate shall be admitted to examination who shall be a member of the University of Oxford of more than one year's standing from the day of his matriculation inclusive; and no candidate shall be admitted to examination more than once after he shall have completed his twenty-third year; but a candidate otherwise qualified shall not be excluded from examination on the ground that he is a graduate of any Scottish University." The *subjects of examination* are: In *Latin*,

Greek, Logic, and Moral Philosophy: The subjects of examination for the degree of M.A., with honours. In *Natural Philosophy and Mathematics*: The subjects of examination for the ordinary degree of M.A.; and higher subjects which any candidates may express a wish to be examined in. All candidates, are required to write an English Essay on a subject prescribed at the time.

Breadalbane Scholarships. — The following regulations have been approved by the Senate:

The number of scholarships shall be two, of £50 each per annum, for the encouragement of Pure and Applied Science.

The scholars shall be chosen, after competitive examination in Mathematics and Natural Philosophy, from among candidates who shall have taken the degree of Master of Arts, or the degree of Bachelor of Science in the Department of Engineering Science, at the University of Glasgow, within a period of not more than three years preceding the examination; provided always that students graduating at the supplementary graduation in November of any year shall, for all purposes, be held to have graduated at the ordinary graduation in the May immediately preceding.

Each scholar shall pursue such course of scientific study during the tenure of his scholarship as the Senate shall in each case prescribe, and shall hold his scholarship for three years, provided that at the end of the first and second years he give the Senate such evidence, by examination or otherwise, as the Senate shall deem sufficient, of having successfully prosecuted the prescribed course of study.

Subjects of Examination.—Thomson's Differential and Integral Calculus; Salmon's Conic Sections; Herschell's Astronomy; Statics and Kinetics, including attractions; Theory of Rotation, and Elements of Hydrostatics; Rankine's Manual of Applied Mechanics, part ii., ch. iii.; Strength of Materials.

Sandford Scholarship.—For matriculated students (not Masters of Arts) who have attended the public Greek Classes for not less than two sessions, tenable two years.

Eglinton Fellowships.—The following regulations have been prescribed:

1. The number of the Eglinton fellowships shall be two (of about £100 per annum each), tenable for three years, subject to the approval of the Senate at the end of the first and second year.

2. The competition for the fellowships shall be open only to deserving students who shall have taken the degree of Master of Arts in the University of Glasgow, at the term preceding the competition. In the event of a candidate being appointed to a vacancy to be filled for less than three years, and being still eligible, under the usual regulations as above, to compete for the said fellowship on the occasion of the next regular vacancy, he shall be qualified

to compete just as if he had not previously held the fellowship, but in no case shall any student be permitted to hold the fellowship for more than three years in all.

3. One of the fellowships shall be open to competition in November, 1866, and thereafter triennially; and the other in November, 1867, and thereafter triennially.

4. The successful candidate shall undertake, during his tenure of the fellowship, to follow such a course of study in the University, or to give such assistance in the teaching work of the University, as the Senate may determine.

5. The *subjects of examination* for the Eglinton fellowship, to be competed for in November, 1881, and thereafter triennially, shall be Logic and Metaphysics, Moral Philosophy, English Literature, and Classics, including Ancient History. The subjects of examination in Latin, Greek, Logic, and Moral Philosophy, shall be the same as those for the degree of Master of Arts with Honours. Candidates are requested to take notice that conspicuous excellence in one of the departments of the examination—in Classics, or in Philosophy and English Literature—will be preferred to moderate attainments in both.

6. The subjects of examination for the Eglinton fellowship, to be competed for in November, 1882, and thereafter triennially, shall be the subjects of examination for the degree of Master of Arts with Honours in Mathematics and Natural Philosophy.

7. The Eglinton fellowship shall not be held along with the Snell scholarship, or Breadalbane scholarship, and the holder of the Luke fellowship or of the Metcalfe fellowship shall not be admitted to compete for the Eglinton fellowship.

Names of candidates for the Eglinton fellowship to be given in to the Assistant Clerk of Senate.

Luke Fellowship.—The following are the regulations:

1. There shall be a single Luke fellowship (of about £120 per annum), tenable for three years, subject to the approval of the Senate at the end of the first and second year.

2. The Luke fellowship shall be awarded on examination in Classics and Ancient History, Moral Philosophy, Logic and Metaphysics, and English Literature.

3. The successful competitor shall be bound to give such assistance in the teaching of the class of English Literature as the Senate may in each case prescribe; and in reporting to the Senate, the examiners shall pay particular attention to this obligation, and shall give English Literature at least equal weight with either Classics or Philosophy.

4. The Luke fellowship shall be open to competition in November, 1868, and thereafter triennially.

5. Competitors for the Luke fellowship must be Masters of Arts of this University, of not more than three years' standing, provided always that students graduating at the supplementary graduation in November of any year shall, for all purposes, be held to have graduated at the ordinary graduation in the May immediately preceding.

6. The Luke fellowship shall not be held along with the Snell scholarship, the Clark scholarship, the Eglinton fellowship, or the Euing fellowship.

7. Students who have competed at one Luke fellowship examination shall not be admitted to another, nor shall the holder of the Eglinton fellowship; but in the event of a candidate's being appointed to a vacancy to be filled for less than three years, and being still eligible, under the usual regulations as above, to compete for the Luke fellowship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the fellowship, but in no case shall any student be permitted to hold the fellowship for more than three years in all.

John Clark (Mile-end) Scholarships. — For candidates who stand highest at written examinations in the branches of learning appointed by the Trustees, tenable for four years.

Thomson Experimental Scholarships.—The scholars are appointed by the Senate on the recommendation of the Professor of Natural Philosophy and the Committee on Physical Apparatus, from among students who have previously shown their zeal and ability in Experimental Investigations in the Physical Laboratory, and they are required to engage in the continued prosecution of Experimental Investigations in the Laboratory for not less than nine months of the year, to the satisfaction of the Professor of Natural Philosophy. These scholarships may be held along with any other bursary, scholarship, or fellowship.

Metcalfe Fellowship.—The following are the regulations:

1. There shall be a fellowship on the Metcalfe foundation, of the annual value of £100, tenable for three years, to be competed for in November, 1872, and thereafter triennially.

2. Candidates must be Masters of Arts with Honours in the department of Mathematics and Natural Philosophy, of not more than three years' standing, provided always that students graduating at the supplementary graduation in November of any year shall, for all purposes, be held to have graduated at the ordinary graduation in the May immediately preceding.

3. The examination shall be the examination for the degree of Master of Arts with Honours in the department of Mathematics and Natural Philosophy.

4. The fellowship shall be held subject to the condition of pursuing a course of study in such of the following subjects—viz., Higher Mathematics, Practical Astronomy, Civil Engineering and Chemistry—as the Senate shall in each case prescribe.

5. The Metcalfe fellowship shall not be held along with the Eglington fellowship, the Snell scholarship, or the Breadalbane scholarship; and the holder of the Eglinton fellowship shall not be allowed to compete for the Metcalfe fellowship; but in the event of a candidate being appointed to a vacancy to be filled for less than three years, and being still eligible, under the usual regulations as above, to compete for the said fellowship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the fellowship, but in no case shall any student be permitted to hold the fellowship for more than three years in all.

Findlater (*Divinity*) *Scholarship.*—The following regulations were adopted by the Senate, Nov. 30th, 1871:

1. The Findlater scholarship shall be awarded annually by competition.

2. At the first competition (April, 1873), and thereafter biennially, the examination shall be in Divinity and Church History; at the second competition (Nov., 1873), and thereafter biennially, the examination shall be in Hebrew and Biblical Criticism.

3. The subjects of examination in each of the four departments shall be the same as those prescribed for the degree of B.D.; but any of the candidates at any examination shall be at liberty to profess additional subjects in one or both of the departments in which he is examined.

4. The examination shall be held at the same time as the examination for the degree of B.D.; those in Hebrew and Biblical Criticism in the commencement of the session, and those in Divinity and Church History at the close of the session.

5. The competition shall be open to all students of Divinity who shall complete the ordinary course at the close of the session in which the examination is held, or who shall have completed their course at the close of the session immediately preceding.

George A. Clark Bursaries or Scholarships.—The following are the regulations:

1. One of these bursaries shall be competed for annually at or immediately after the November examination for degrees in Arts.

2. The candidates for the bursaries shall be either Masters of Arts of this University who have taken the degree of M.A. with Honours, or students presenting themselves for the Final examination for the M.A. degree with Honours, in any one of the four departments enumerated in the Ordinances of the Universities Commissioners, No. 14, § vii., and No. 18, § iii., viz.: (1) Classical Literature; (2) Mental Philosophy, including Logic, Metaphysics, and Moral Philosophy; (3) Mathematics, including Pure Mathematics and Natural Philosophy; (4) Natural Science, including Botany, Geology, Zoology, and Chemistry. But no student shall be eligible for the examination after the expiration of more than three winter sessions from the time of his completing the course necessary for the M.A. degree.

3. The successful candidate shall undertake, during his tenure of the bursary, to give such assistance in the teaching work of the University, and to follow such a course of study in the University, as the Senate may determine.

4. The subjects of examination each year shall be those which constitute the examination for Honours in one of the above-named departments (the department selected each year for examination to be publicly announced). The Senate reserve the right to withhold the scholarship, should none of the competitors reach the standard of attainment required of graduates in Arts with highest Honours.

5. In the event of the examiners reporting in any year that no candidate has done sufficiently well in the subjects of that year to deserve the scholarship, no appointment shall be made in that year; but it shall be in the power of the Senate to hold an examination for the same scholarship and in the same subjects, in the following year, provided that in that case the scholarship shall be held for three years only and not for four, the surplus revenue being added to the capital of the fund. Should the same thing occur again, it shall be in the power of the Senate to appoint a scholar for two years only, or for one year only, the examination in each case being in the same subjects as when the scholarship was first competed for. In the same manner, in the event of a vacancy occurring in the tenure of any of the scholarships otherwise than by lapse of time, the Senate may make an appointment for the remainder of the term for which the scholarship might have been held by the student vacating it, and after examination in the same subjects as those for proficiency in which the scholar was originally appointed; but in no case shall the regular rotation of subjects as above provided for be disturbed. In the competition for scholarships to be held for less than four years, no student shall be admitted to examination who would not be eligible, as above arranged, for a scholarship to be held for four years. In the event of a candidate being appointed to a vacancy to be filled for less than four years, and being still eligible, under the usual regulations as above, to compete for the said scholarship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the scholarship, but in no case shall any student be permitted to hold the scholarship for more than four years in all.

6. It shall not be competent for the holders of these bursaries to hold any other bursary or scholarship in this University.

7. It shall be in the power of the Senate to deprive any bursar of his bursary, in the event of his not complying, to their satisfaction, with any of the above regulations.

8. The examiners shall be the same as the examiners for the degree of M.A. with Honours in each of the several departments.

Scott Scholarship.—For Masters of Arts in the University of Glasgow of not more than three years' standing, having graduated with Honours in Classics or in Mental Philosophy, or for students who, at the time of competition, are presenting themselves for the Final

examination in the said University for the M.A. degree with Honours in Classics or in Mental Philosophy, tenable for two years. The Scott scholarship is not to be held along with any other scholarship, fellowship, or bursary of the University of Glasgow. The *subjects of examination* are, with the addition aftermentioned, Classics or Mental Philosophy, or both of these, the special subjects being those for the examination for the M.A. degree with Honours in the given department or departments for the year, and in addition to the examination above-mentioned the competitors must undergo an examination in English Literature of a higher kind than that required for an ordinary pass in Mental Philosophy."

William Euing Fellowships.—For deserving students who have completed the regular curriculum in Arts, and taken the degree of M.A. at this University, and to be awarded after competition in the subjects of the Arts curriculum. The fellows are required to reside in Glasgow for at least nine months of the year, and "to open private classes, of limited numbers, for giving instruction to, and aiding students of the University—more especially during the vacation, or such part thereof as may be found expedient—in such studies as may be auxiliary to, or illustrative of, the course of lectures which such students may have attended, or be desirous of attending, and also to carry out the same purposes by a systematic course of private tuition." One fellowship is attached to the department of Classics, one to the department of Mathematics and Natural Philosophy, and one to the department of Mental Philosophy, including Logic, Moral Philosophy, and English Literature.

Black Theological Fellowship.—Candidates must be members of the Established Church of Scotland. The following regulations have been adopted by the Senate with the sanction of the University Court:

1. The Black Theological fellowship shall be tenable for two years.

2. It shall be awarded by competition open to Masters of Arts from any of the Universities of Scotland, who shall complete the ordinary curriculum of Theological study in the University of Glasgow in the year in which the examination is held, or who shall have completed that curriculum in any of the three preceding years.

3. At the first competition in November, 1877, and thereafter in November at intervals of four years, the examination shall be in Hebrew and Biblical Criticism; and at the second competition, in April, 1879, and thereafter in April at intervals of four years, the examination shall be in Divinity and Church History.

4. The fellowship shall be awarded by the Theological Faculty only when the examining Professors shall report that the candidate is of sufficient merit.

5. The holder of the fellowship shall, during his tenure of it, perform such

duties—whether in the form of giving a short course of lectures, or of undertaking tutorial work, or otherwise—within the University, as may be assigned to him by the Faculty of Theology with the sanction of the Senate.

6. No candidate who has gained the fellowship at one examination shall be at liberty to compete for it a second time.

7. The fellowship shall not be held in conjunction with any other Theological fellowship or scholarship falling to be awarded at the same time, or subsequently during its tenure.

Ferguson Scholarships.—One of the scholarships will be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Metaphysics, and Ethics.

Shaw Philosophical Fellowship.—The following are the conditions, namely:

1. The said fellowship shall bear the name of "The Shaw Philosophical Fellowship," in memory of the said Sir James Shaw, Baronet.

2. The patronage of the said Shaw Philosophical Fellowship shall belong to the said Senatus Academicus, and shall be exercised by them, subject to the conditions herein contained, for the encouragement of the study of Logic, Metaphysics, including Psychology, Moral Philosophy, and the History of Philosophy.

3. The fellowship shall be awarded by competitive examination in the subjects of Logic, Metaphysics, including Psychology, Moral Philosophy, and the History of Philosophy.

4. The fellowship shall, on such occasion of an appointment thereto, be open to the competition of graduates in Arts of the Scottish Universities, that is to say, the University of Edinburgh, the University of Glasgow, the University of Aberdeen, and the University of St. Andrew, of not more than five years' standing at the time of the competition, and of all students of the said Scottish Universities who, although they have not graduated in Arts, shall yet have successfully passed the last of the examinations necessary for such graduation in Arts, within the period of five years before the time of the competition; and the said Senatus of the University of Edinburgh, with consent of the Senatus of the other Scottish Universities aforesaid, or of a majority of them, and with the concurrence of the University Court of the University of Edinburgh, shall have power either to increase or to reduce the number of years of standing as graduates, or as students who have passed all the examinations necessary for graduation, as above fixed, for competitors for the fellowship.

5. The fellowship shall be tenable for five years only, but the said Senatus Academicus of the University of Edinburgh shall have power, with consent of the Senatus of the other Scottish Universities aforesaid, or of a majority of them, and with the concurrence of the University Court of the said University of Edinburgh, to extend, with reference to all holders of the fellowship, the term

of tenure to any period of years not exceeding ten, if, in the course of time, it shall appear to them desirable to do so, from an increase in the number of foundations of a similar kind in the University of Edinburgh, or in the other Scottish universities, or other sufficient reason.

6. The competitive examination for the said fellowship shall, except in the case below provided for, be conducted by two examiners, to be appointed in the manner following—to wit, one of the examiners shall be appointed by the Senatus Academicus of the University of Edinburgh, either from among the members of the said Senatus or others, as they may think proper, and the other examiner shall be appointed by the Senatus Academicus of one of the other Scottish universities in rotation.

7. The said examiners, so appointed, shall report their opinion of the result of the examination to the Senatus Academicus of the University of Edinburgh, who shall, as patrons of the said fellowship, appoint thereto the candidate who appears by the report to be best qualified by proficiency in the subjects of Logic, Metaphysics, including Psychology, Moral Philosophy, and the History of Philosophy, provided that, as required by the clause next following, such best qualified candidate shall, in the opinion of both the examiners, have manifested a sufficiently high degree of proficiency to merit the fellowship. . . .

9. Each holder of the said fellowship shall, during his tenure thereof, be entitled to receive the annual proceeds of £4100, and of any additions of the said sum which may hereafter be made thereto, as after mentioned, after deducting all reasonable expenses, including the payment of remuneration to the examiners appointed as aforesaid. . . .

12. It shall not be competent for any person to hold the said fellowship along with any other fellowship, scholarship, or bursary in any Scottish university, or appropriated to the students of any Scottish university or universities. . . .

17. It shall be in the power of the Senatus Academicus of the University of Edinburgh to require the holder of the Shaw Philosophical fellowship, during the fourth or fifth year of his tenure of it, to deliver in the University of Edinburgh a course of lectures, not exceeding four, on any of the subjects for the encouragement of the study of which the fellowship has been founded; and notice shall be given to the holder of the fellowship twelve months previously to the time fixed for the delivery of the said lectures that he is required to deliver them; but the said Senatus, with consent of the University Court of the University of Edinburgh, shall have power to alter the number of lectures, if it shall be found desirable to do so.

3.—PRIZES.—Besides the Class Prizes and a number of prizes given by the different Professors for particular kinds of merit, there are others which the generosity of public-spirited individuals has founded for the encouragement of learning in the University:

Foundation.	Nature of Prize.	Awarded for
Arnott	£25 and £15	Examinations.
Brunton Memorial	£10	,,
Buchanan (3)	Books	,,

Foundation.	Nature of Prize.	Awarded for
Cleland	Gold Medal	Essay.
Coulter	£5 and £2 10s.	,,
Cowan (3)	Gold Medals	Examinations.
Dobbie-Smith	Gold Medal	Essay.
Dowanhill	£21 and £10 10s.	Elocution.
Ewing	Gold Medal (biennial)	Essay.
Gartmore	Do. (,,)	,,
Gladstone Historical	£21 (biennial)	Examination.
Harvey, George	£20	,,
Henderson	£21	Essay.
Jeffrey	Gold Medal	Examination.
Luke Historical	£12 (biennial)	,,
Macfarlan and Cook	£21	,,
Muirhead	Books	,,
Rae Wilson	Gold Medal	Essay.
Savigny	6,900 Marks	,,
Scott-Macfarlan	Gold Medal	Examination.
University	Silver Medal	Essay.
Walker (4)	Books, &c.	Examinations.
Watt	£10	Essay.

Admission of Candidates under Seventeen.

On the 4th April, 1882, the University Court decided to introduce an *Entrance Examination* for students entering the Faculty of Arts with a view to a degree in Arts. The examination to come first into force in November, 1883. The following is an outline of the scheme:

1. The examination shall apply only to public students, i.e., to students attending a class with a view to receiving a public certificate, but all matriculated students shall be permitted, as at present, to enrol without examination in any class in the Faculty of Arts for purposes of instruction.

2. The examination shall in the meantime be compulsory only in the case of students under the age of seventeen, and optional to students above that age.

3. The subjects of examination shall be the following: (1) English; (2) Latin; (3) Greek; (4) Elementary Mathematics including Arithmetic; (5) a Modern Language; (6) History. Of these subjects, English shall be compulsory on all candidates, and any two of the other subjects which the candidates may select. But no student below the age of seventeen shall in his first session obtain a public certificate in a Classical class, unless he has passed the examination in one of the Classical languages; or in a Mathematical class unless he has passed the Mathematical examination.

4. Provision shall be made for the appointment and remuneration (whether by a small fee from each candidate, or otherwise, as may hereafter be determined) of examiners to act as joint-examiners with the Professors of the subjects embraced in the examinations, or as examiners in the subjects not included in the curriculum.

University of Glasgow Local Examinations.

Both boys and girls are admitted, but boys are not admitted above

the age of eighteen. Printed forms, in which candidates are to make application, may be obtained from the Secretary at the University, in the end of March. Candidates must fill up and return these forms *before the 18th April*, forwarding the fees at the same time. Serious inconvenience is caused when applications are received after the date mentioned.

Places of Examination.—Candidates will be examined at the University, Glasgow, and at such places as the Board may appoint as Local Centres. The Board undertake to establish a local centre in any district in Scotland* (excepting the other University seats, St. Andrews, Aberdeen, and Edinburgh), upon the following conditions: 1. A local committee of those interested in the higher education of the district must be formed, and must make arrangements for the proper management of the examination. 2. This committee must guarantee the appearance of at least six candidates, or a sum equivalent to their fees. 3. Any expenses incident to the examination in each local centre (but not including fees to examiners) must be borne by the local committee.

The secretary of the local committee will receive from the candidates belonging to the district their forms of application, duly filled up, and their fees, and will transmit them *on the 19th April* to the Secretary at the University.

Certificates.—The certificates granted by the Board are of three grades, viz.: I. Junior—II. Senior, for both boys and girls. III. Higher, for women. They are signed by the Vice-Chancellor of the University, and specify in each case the subjects in which the candidate has passed. The *subjects of examination*, proficiency in which gives a right to a certificate, are divided into two classes—those that are common to all the certificates, and those that are special to the several certificates. All candidates must take the common subjects, and must make a selection from the special subjects, according to the grade of certificate desired. Candidates for the Junior or Senior certificate may, and candidates for the Higher certificate must, take the common and the special subjects in different years. The names of those who pass in the common subjects are registered, but no certificate is issued till the candidates have also passed in the special subjects. Candidates may also present themselves for examination in Drawing and Music, and their proficiency in these extra subjects will be recorded in the certificate, but the numerical values obtained will not be reckoned in any competition.

* Special arrangements will be made for other countries, in the case of members of the Correspondence Classes of the Glasgow Association for the Higher Education of Women.

The time tables should be consulted by candidates in selecting their lines of study, so as to avoid, as far as possible, the inconvenience to themselves consequent upon choosing subjects arranged for consecutive hours.

The following are the common subjects, viz.: For Junior, for Senior, and for Higher certificate: 1. English; 2. History; 3. Geography; 4. Arithmetic; 5. Scripture History; 6. Latin. Girls are not required to take Latin.

Candidates for the Junior certificate must offer themselves for examination in not less that *two* and not more than *five* special subjects. The subjects are arranged in four departments, and the subjects selected by any candidate must be taken from at least two of the departments. *Department A* comprehends: 1. English Composition; 2. English Literature; 3. History and Geography; 4. Scripture History. *Department B*: 1. Latin; 2. Greek; 3. French; 4. German. *Department C*: 1. Mathematics; 2. Natural Philosophy; 3. Astronomy. *Department D*: 1. Chemistry; 2. Botany; 3. Zoology; 4. Physiology; 5. Geology and Physiography. From Department D not more than one subject may be taken.

Candidates for the Senior certificate must profess not less than *two* nor more than *six* subjects, selected from at least two of the departments in which the special subjects for this certificate are arranged. *Department E* comprehends: 1. English Literature; 2. History; 3. Political Economy; 4. Logic; 5. Scripture History. *Department F*: 1. Latin; 2. Greek; 3. French; 4. German. *Department G*: 1. Mathematics; 2. Natural Philosophy; 3. Astronomy. *Department H*: 1. Chemistry; 2. Botany; 3. Zoology; 4. Human Physiology; 5. Geology. From Department H not more than one subject may be taken.

The Higher examination is open to all women who (*a*) have taken the Senior certificate in the Local Examinations of any University, or (*b*) having attained the age of eighteen years, have passed in the common subjects. Candidates must offer themselves for examination in at least *three*, and not more than *six* subjects, selected from at least three out of five departments in which the special subjects for this examination are arranged. *Department A* comprehends: 1. English Language and Literature; 2. History of English Literature. *Department B*: 1. Latin; 2. Greek; 3. French; 4. Italian; 5. German. *Department C*: 1. Mathematics; 2. Natural Philosophy; 3. Astronomy. *Department D*: 1. Psychology, Logic and Metaphysics; 2. Moral Philosophy; 3. Political Economy; 4. History; 5. Scripture. *Department E*: 1. Chemistry; 2. Botany; 3. Geology and Physical Geography; 4. Zoology; 5. Physiology.

The successful candidates for the Junior certificate are ranked in two

Divisions, the first including those who pass in three or more than three special subjects; the second, those who pass in only two special subjects. The candidates in each division are ranked in two classes. In determining the order of merit, the aggregate of the marks gained in the several subjects is taken, but in the case of candidates who take more than three special subjects, no marks are given for such additional subjects unless the candidate has gained more than 40 per cent. of the attainable marks; and the marks added from such additional subjects are the aggregate marks gained, minus the 40 per cent.

Those who obtained Senior certificates are classified in like manner, with a like deduction in the case of candidates who take more than three special subjects. In the Higher examination the deduction in the case of candidates who take more than three special subjects is 50 per cent. No certificate is granted if the subjects in which the candidate has passed belong to only one department. In the Higher examination a candidate, in order to obtain a certificate, must pass in subjects taken from at least three departments.

Candidates for the Junior certificate are required to pay a fee of 20s. No additional fee is payable if the candidate take the common subjects at one examination and the special subjects for the Junior certificate at another. Candidates for the Senior certificate holding a Junior certificate of Glasgow University, or of any university whose certificates may be recognised by the Board, are required to pay a fee of 20s. Candidates who do not hold such a certificate are required to pay 30s. Candidates who take the common subjects at one examination, and the special subjects for the senior certificate at another, are required to pay a fee of 20s. for each examination. The fee for the Higher examination for Women (special subjects) is £2 2s. Any holder of a certificate (Junior, Senior, or Higher) may, on payment of a fee of 10s., be admitted to examination in one or more additional subjects, with the view of adding to the value of the certificate previously obtained.

Candidates who have not been successful may re-appear for examination on the following terms: 1. Any candidate who has failed in only one of the common subjects shall, on application in a subsequent year, be admitted to examination in that subject without payment of additional fee, and without requiring to undergo examination again in the subjects already passed. 2. Any candidate who has failed in more than one of the common subjects shall, on application in a subsequent year, be admitted to examination in the whole of the common subjects on payment of a fee of 10s. 3. Any candidate who has failed in only one of the special subjects shall, on application in a subsequent year, be admitted to examination in that subject so as to complete the mini-

mum requirements for a certificate, without payment of additional fee, and to examination in any other subject or subjects on payment of a fee of 10s. 4. Any candidate who has failed in more than one of the special subjects, but who has passed in such subject or subjects as, with the addition of *one* of those in which the candidate failed, would have sufficed for a certificate, shall, on application in a subsequent year, be admitted to examination in *that* subject without additional fee, and to examination in any other subject or subjects on payment of a fee of 10s. Fees are not returned under any circumstances. Bursaries and prizes are awarded to those who excel in the examinations.

Students' Societies.

Theological Society. — The object of the Society is to discuss, by means of essays and debates, theological and ecclesiastical questions. The membership of the Society is open to all students attending the Glasgow University Divinity Hall.

Medico-Chirurgical Society.—The principal business of the Society is the prosecution of Medical Research by dissertations and debates. All medical students and medical men of one year's standing are eligible for ordinary membership, which may be obtained on payment of the annual subscription of 2s. 6d. All qualified medical practitioners of more than one year's standing are eligible for extraordinary membership. Meetings of the Society are held in the Forensic Medicine Classroom every Friday evening during the winter session at 7.30 P.M.

Dialectic Society.—The Society meets weekly during the session for the discussion of literary, philosophical, and political subjects. All students of the University are eligible for ordinary membership, which is obtained by payment of the annual subscription of 1s. The roll is closed each session January 15.

Dumfriesshire and Galloway Literary Society.—The object of this society is to bring together students from the shires of Dumfries, Kirkcudbright, and Wigton. Any student who is a native of these shires, or is connected with them, may become a member on payment of the annual subscription of 1s. Meetings are held fortnightly during the session, when essays are read and criticised and subjects debated.

UNIVERSITY OF ST. ANDREWS.

University Prizes and Scholarships.

The number of bursaries attached to the United College is eighty-four, varying in value from £5 to £50 per annum. The endowments for special prizes yield annually about £182.

The number of bursaries belonging to St. Mary's College is twenty,

in value from £6 to £50 per annum. There are also twenty bursaries of the same value, transferable from the United College, when the bursars proceed to the study of Divinity. In this College there are two prizes of £10 each, and a testimonial of £21, open to competition in each session.

There are ten scholarships in the University—two of the annual value of £50 each, tenable for four years; two of the annual value of £50 each, tenable for two years; four tenable for four years—value for the first year £100, and £50 for each of the three following years; and two of the annual value of £39, tenable for three years.

The proceeds available for bursaries, prizes, and scholarships in the University amount annually to upwards of £2500.

Besides the Class prizes, and prizes given by the different professors for particular distinction, the following have been founded:

Gray (*English*).—One *prize* of the value of £10, awarded annually for the best essay on some prescribed subject in Literature or Philosophy. This prize is open to the competition of all students in regular attendance on the classes during the session at the close of which the essay is prescribed. Patrons—the Senatus Academicus.

Carstairs (*Mathematics*).—The annual value is £10, divided as follows: (1) *Books* of the value of £5, to the best scholar in the third or highest Mathematical Class. (2) *Books* of the value of £3, to the best scholar in the second Mathematical Class. (3) *Books* of the value of £2, to the best scholar in the first or junior Mathematical Class. Patrons—the Senatus Academicus.

Miller (*General Scholarship*).—Value expended in prizes for the encouragement of learning in the United College, St. Andrews. (1) There are altogether twelve *prizes*—namely, one for each of the three best students in each of the four years of the curriculum of the College, (2) The Prizes are: *Eight pounds* to the best student of the first year, and *books* worth £2, divided, at the discretion of the College, between the second and third best. *Twelve pounds* to the best student of the second year, and *books* worth £3, divided, at the discretion of the College, between the second and third best. *Sixteen pounds* to the best student of the third year, and *books* worth £4, divided at the discretion of the College between the second and third best. *Twenty pounds* to the best student of the fourth year, and *books* worth £5, divided, at the discretion of the College, between the second and third best. Trustees—the Chancellor of the University, the Principal of the United College, and the Sheriff of Fife.

Duncan (*Mathematics*).—Founded in 1858, by former pupils of Professor Thomas Duncan, LL.D., of this University, and directed by him

to the furtherance of Mathematical learning in the United College. One prize of the value of £14, or thereby, which is annually competed for by students, who must have attended at least the second and third Mathematical Classes during separate sessions. The competition takes place at the commencement of the session immediately following that of their attendance on the third class. Trustees—the Professor of Mathematics, the Provost of St. Andrews, and the Minister of St. Leonard's.

Bruce of Grangehill and Falkland (*Logic*).—To be annually awarded by competition to a student "for excellence in the study of Logic and Metaphysics." The value of the prize is £10. Patrons—the Senatus Academicus.

Arnott Prizes.—Founded in 1869, by Dr. Neil Arnott, who presented to the University of St. Andrews £1000 for the purpose of founding a prize or prizes for the encouragement of the study of Physical Science. Under this foundation a prize or prizes will be awarded annually at the conclusion of the session of the United College.

Tullis Prizes.—Founded in 1876, by William Tullis, Rothes, Markinch, an alumnus of the University of St. Andrews, who presented to the United College £700 for encouraging the study of Mathematics. From the annual proceeds, £12 to be given to the student who obtains the first prize in the first Mathematical Class, along with a commemorative medal. Also the same sum and medal to the student who obtains the first prize in the second class.

St. Mary's College Prizes.

Prizes are awarded for general proficiency in the different classes at the close of the session. The following special prizes are annually competed for:

Gray.—One prize, of the value of £10, for the best essay on a prescribed subject. The competition is open to all students in regular attendance on the classes in the College in the session at the close of which the essay is prescribed. Patrons—the Senatus Academicus.

Cook and Macfarlan Testimonial.—Instituted in 1847, along with a similar prize in the University of Glasgow.

Chancellor's Prize.—A prize, in books, has been annually given in St. Mary's College by the Chancellor, awarded to senior students for proficiency in all the departments of study.

Graduation in Arts.

1. The course of study necessary for the degree of *Master of Arts* extends over four winter sessions, and includes attendance for not less

than two sessions* on the classes of Humanity, Greek, and Mathematics respectively; and attendance for not less than one session on the classes of Logic, Moral Philosophy, and Natural Philosophy respectively; and also attendance on a course of English Literature (Rhetoric). But any student who, at the time of his entrance to the University, can satisfy the professors of the Faculty of Arts, on examination, that he is qualified to attend the higher classes of Latin, Greek, or Mathematics, or any one of them, may be admitted to such higher class or classes, without having previously attended the first or junior class or classes in the same department. And when any student has been thus admitted to the higher classes both of Latin and Greek, without having previously attended the first or junior Latin and Greek Classes, his course of study for the degree of Master of Arts may be completed within three winter sessions instead of four. 2. In pursuing the course of study for the degree of Master of Arts, no student is permitted to pass from the junior to a higher class in any department, unless the professor is satisfied of his fitness to enter the higher class. 3. A student who has attended one or more sessions in any Scottish university may complete his course of study for the M.A. degree at the University of St. Andrews, and be admitted to graduation in the same way in all respects as if the previous part of his course of study had been taken there. Always provided that he produce to the satisfaction of the Faculty of Arts of the University of St. Andrews the necessary certificates from the former University, and give attendance during the *last two sessions* of his course at the University of St. Andrews; provided also that he pass, in the University of St. Andrews, *all* the examinations required for the degree of Master of Arts. 4. Candidates for the degree of Master of Arts must be examined on all the subjects of instruction embraced in the above course of study, and the examinations may be conducted partly in writing and partly *viva voce*. 5. Any student who has completed his attendance on the Latin or Greek classes required in the prescribed course of study may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. In like manner, any student who has completed the attendance required in the prescribed course of study on the classes of Logic, Moral Philosophy, and English Literature (Rhetoric), may be examined on these subjects at an examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. Also, in like manner, any student who has completed the attendance required in the prescribed course of study on the classes of

* A senior class of Humanity, of Greek, and of Mathematics must be attended.

Mathematics and Natural Philosophy may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. And if such student shall satisfy the examiners, when so examined in Latin and Greek, or in Logic, Moral Philosophy, and English Literature, or in Mathematics and Natural Philosophy, he shall receive from them a certificate to that effect, and he shall not be again examined on the same subjects as a condition of his taking the degree of Master of Arts. 6. The degree of Bachelor of Arts shall not hereafter be conferred. 7. Students who have passed, in any order, the ordinary examination on the several subjects embraced in the prescribed course of study are, on presenting themselves at the public ceremonial of graduation, entitled to receive the degree of Master of Arts.

Graduation in Arts with Honours.—1. There are four Departments of Examination for Graduation in Arts with Honours, namely: (1) Classical Literature, including Latin and Greek; (2) Mental Philosophy, including Logic, Metaphysics, and Moral Philosophy; (3) Mathematics, including Pure Mathematics and Natural Philosophy; and (4) Natural Science, including Chemistry, Physiology, Natural History, and Botany. In each of the first three of these departments there are two grades of Honours, denominated respectively the First Class and the Second Class; but in the fourth department there is only *one* grade of Honours. Each grade of Honours is intended to represent as nearly as may be a uniform standard of qualification, and the names of the candidates found on examination to be entitled to Honours are arranged in either class in alphabetical order. 2. Students who have not yet graduated, but who have passed in any or in all of the departments of the examination for the ordinary degree of Master of Arts, may proceed to examination for Honours in such departments, provided they have not ceased to attend a class or classes in the University as matriculated students for more than one winter session. Thereafter they can only be admitted by special permission of the Senatus on the ground of ill health or other sufficient cause. 3. Any student who has completed the attendance required for the ordinary degree of Master of Arts on the classes in any one or more of the departments of Classics, Mental Philosophy, or Mathematics, may proceed to examination for Honours in such department without previously submitting to examination for the ordinary degree; and if found sufficiently qualified, he shall be held to have passed in that department for the degree of Master of Arts with Honours; but if he do not satisfy the examiners that he is worthy of Honours, and yet show such attainment as in their judg-

ment may entitle him to graduate without Honours, he shall be held to have passed for the ordinary degree of Master of Arts in the department in which he has been examined; which failing, he shall not again be admitted to examination for Honours in the same department until he shall have passed for the ordinary degree.

Fees for Examination for M.A.—A fee of £1 1s. must be paid at least one day previous to entering *each* of the examinations specified in the preceding notice, viz.: 1. For the examination on Latin and Greek; 2. For the examination on Logic, Moral Philosophy, and English Literature; 3. For the examination on Mathematics and Natural Philosophy. The fees are received at the University Library by the Registrar. A certificate from the Registrar that the fee has been paid must in each case be presented to the examiners before examination. No further fee than the £3 3s., as aforesaid, will be payable in respect of examination for, or admission to, the said degree, whether with or without Honours.

Graduation in Science.

I. *Natural or Physical Sciences.*—1. All candidates for the degree of Bachelor of Science in the department of the Physical and Natural Sciences must give proofs of having received a liberal education by being either—(*a*) Bachelors or Masters of Arts in any British or Colonial University; (*b*) Doctors or Bachelors of Medicine or Surgery in any British or Colonial University; (*c*) Holders of two departmental certificates in the Faculty of Arts of St. Andrews; (*d*) Matriculants who have passed the matriculation examination in any Scotch university in the department of Medicine, or matriculated students of the University of London. Failing any of the above qualifications, the candidate must pass a Preliminary examination in English Latin, Arithmetic, the Elements of Mathematics, the Elements of Mechanics, and at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, and Moral Philosophy. (For subjects of Preliminary examination see Syllabus *postea*.) The candidate will not be admitted to any Professional examination for his degree till he has passed in the subjects of the Preliminary examination. There will be two examinations in Science for the degree of Bachelor of Science. The examinations will be written and oral, and special value will be given to the practical knowledge of the subjects possessed by the candidate. The first examination will be concerned with the general knowledge of the candidate on the following subjects: 1. Mathematics; 2. Natural Philosophy; 3. Chemistry; 4. Zoology; 5. Geology; 6. Physiology.

This examination is called the First Bachelor of Science Examination, and is compulsory on all who do not possess the following qualifications: (*a*) Graduates of the University of St. Andrews are exempted from examination on the subjects in which they have passed for the degree of Master of Arts. (*b*) Bachelors or Doctors of Medicine who have taken Honours in the Natural Sciences at their Professional examinations are exempted from the subjects in which they have taken Honours. 3. The candidate who has successfully passed the First Bachelor of Science examination may, after an interval of twelve months, present himself for the Final examination, which shall be entitled the Second Bachelor of Science examination. For this examination the candidate must restrict his studies to some special group of the Sciences, of which he will be expected to show an accurate and detailed knowledge. The candidate, therefore, must profess one, and not more than one, of the following groups, viz.: *A.* Higher Mathematics, and Natural Philosophy; *B.* Experimental Physics, and Chemistry; *C.* Chemistry, and Geology; *D.* Physiology, Zoology, and Palæontology; *E.* Physiology, Botany, and Geology. 4. Should the candidate, after obtaining the degree of Bachelor of Science, desire to proceed to the degree of Doctor of Science, he may, after the lapse of twelve months, present himself for a third examination, to be called the Doctor of Science examination. For this examination, the candidate must profess one, and not more than one, of the subjects belonging to the group in which he proceeded to the degree of Bachelor of Science; and he must further profess some special branch of that subject, to which he has devoted special attention, and in which he believes himself to have attained special knowledge. He must also present a thesis embodying some original researches on the subject of his intended examination, and this must be approved of by the examiners. Should the candidate satisfy the examiners that he has obtained this thorough knowledge of his subject, he may, provided he has reached the age of twenty-one years, be recommended to the Senatus for the degree of Doctor of Science.

II. *General Rules.*—Degrees in Science will be given only to candidates who have attended at least two academic years in the University of St. Andrews. During each of these years the candidate must have attended at least two Science classes, embracing 150 lectures, on the subjects embraced in the examination. The candidate must also bring evidence that he has attended two other Science classes, of at least fifty lectures each, for one or two sessions, either at the University of St. Andrews or at universities or institutions recognised and approved of by the University of St. Andrews. It shall be in the option of the

student either to take the necessary classes required for graduation in Science in three sessions, during each of which he attends two Science classes, or to make up one of these sessions by attendance on a single Science class in each of two separate sessions, thus extending his entire Science course over four sessions. No course shall be considered as qualifying candidates for examination in the terms of this section unless it consist of at least fifty lectures. No course, further, shall be considered as qualifying for graduation in Science unless the fee paid for the course shall have been at least £3 3s.

III. *Times of Examination and Fees.*—The Preliminary examination for the degree of Bachelor of Science will be held in the early part of April in each year, before the period fixed for the M.A. examinations, and also in the later portion of the month of October. The Professional examinations for the degrees of Bachelor and Doctor of Science will be held in the April of each year, at the time when the examinations for the M.A. degree are in progress. Candidates for any of these examinations must announce their names to the Convener of the Committee on Science Degrees, on or before the 1st of April and the 1st of October. Before admission to examination, the candidate must pay to the Registrar of the University the fee exacted for the same, according to the following scale: 1. For Preliminary examination, or for registration of qualification, £1 1s.; 2. For the first Bachelor of Science examination, £2 2s.; 3. For the second Bachelor of Science examination, £2 2s.; 4. For the Doctor of Science examination, £5 5s.—£10 10s.

IV. *Syllabus of Subjects.—Preliminary Examination.—Compulsory subjects*: 1. *Latin*: book ii. of Æneid, and book i. of Cæsar. 2. *English*: Writing a short Narrative on a subject announced at the time by the examiner, with special attention to spelling, literary construction, and punctuation. 3. *Arithmetic*: the common rules, including decimal fractions. 4. *Mathematics*: Euclid, books i.-iii.; the elements of Algebra, including simple equations. 5. *Mechanics*: *Optional subjects, of which two must be selected by the candidate*: 1. *Greek*: Xenophon's Anabasis, book i., and the Odyssey, book iii. 2. *French*: La Fontaine's Fables. 3. *German*: Schiller's Wilhelm Tell. 4. *Higher Mathematics*: Euclid, books i.-vi.; Algebra, including Quadratic Equations; Elements of Plane Trigonometry. 5. *Natural Philosophy*: Bird and Brooke's Text-book of Natural Philosophy. 6. *Moral Philosophy and Logic*: Whately's Logic, and Smith's Moral Sentiments.

First Bachelor of Science Examination.—1. *Mathematics*: Euclid, books i.-vi., with the first twenty-one propositions of book xi., and Geometrical Conic Sections; Elementary Trigonometry, and Elements of Analytical Conic Sections; Elementary Algebra, including Pro-

gressions, Surds, the Binomial Theorem, &c. 2. *Natural Philosophy*: (*a*) Applied Mathematics—including the treatment by Elementary Geometry, Algebra, and Trigonometry of the following subjects (such as may reasonably be acquired in one or two sessions' attendance at a course of Natural Philosophy): Kinematics — including Velocity, Acceleration, Angular Velocity, Simple Harmonic Motion, &c., and their composition and resolution. Abstract Dynamics — including Elementary Statics, Kinetics, Hydrostatics, and Hydrokinetics. Geometrical Optics; Plane Astronomy. (*b*) Experimental Physics—including Laws of Motion; Properties of Matter; Sound and Harmonics; Light, with the fundamental principles of the Undulatory Theory; Heat, with the fundamental principles of the Dynamical Theory; Electricity—including the Experimental Laws of Static and Galvanic Electricity, Induction, Magnetism, and Electro-Magnetism; Conservation of Energy as the experimental law of physical phenomena. 3. *Chemistry*: Nature of Affinity—how modified by physical agents; Laws of Combination—Symbolic Notation; Family Classification of Elements; Electro-chemical classification of Elements; Systems of Crystallography — Crystallographic arrangement of Elements and Compounds; Isomorphism—Isomorphic grouping of Elements and Compounds; Properties of Acids, Bases, and Salts; Manufacture of Sulphuric, Nitric, and Sulphurous Acids—Gunpowder—Carbonate of Soda—Earthenware and Glass; Metallurgy—Metallurgy of Iron, cast, wrought, and steel—Preparation of Silver, Lead, and Mercury from ores; Classification of Organic Compounds—Hydrides, Hydrates, Alcohols, Sugar, Soap, Coal-gas, and Ethers. 4. *Zoology* (*including systematic Palæontology*): The Characters of Living Beings, and the distinctions between the Animal and Vegetable Kingdoms; the Principles of Zoological Classification, and the ideas involved in "Specialisation of Function," "Morphological Type," "Homology," and "Analogy." The general Structure and Physiology of the following groups of animals, and their distribution in time and in space: Gregarinidæ, Rhizopoda, Infusoria—Hydrozoa, Actinozoa—Echinodermata, Scolecida — Annelida, Crustacea, Arachnida, Myriapoda, Insecta — Polyzoa, Tunicata, Brachiopoda, Lamellibranchiata, Gasteropoda, Pteropoda, Cephalopoda; Pisces, Amphibia, Reptilia, Aves, Mammalia; the candidate will be required to refer to its proper group, amongst those named above, any specimen which may be exhibited for this purpose by the examiner. 5. *Geology* (including Historical Palæontology): Physical Geography, so far as bearing upon Geology—The figure, dimensions, and planetary relations of the earth, internal temperature of the earth, origin of dry land, movements of

elevation and depression, origin of mountain-chains, general phenomena exhibited by volcanoes, earthquakes, origin of valleys, the atmosphere as a geological agent, rain, rivers, the sea, ice and ice-action, organic agents of geological change. Physical Geology—Successive formation of the crust of the earth; classification of rocks; the mode of formation, characters, and structure of the different aqueous rocks; the volcanic rocks; the plutonic rocks; the metamorphic rocks; divisional planes of rocks, joints, bedding, cleavage, foliation; original horizontality of strata; folds and contortions of strata; unconformability and overlap; faults; ages of the aqueous rocks. Historical Geology—The characters, divisions, and succession of the Geological formations of Great Britain, and the more important fossils by which they are distinguished. 6. *Physiology*: The candidate must show a general knowledge of the following: The Chemistry of the Tissues; the Microscopic structure of the Simple and Compound Tissues; the general process of Nutrition—Foods—Mastication—Insalivation—Deglutition—Gastric Digestion—the Liver, its structure and function—the Pancreas, its structure and function—the intestinal Glands—Digestion in the intestine; Absorption from the intestine—the Lacteals and Lymphatic System; the Blood—its composition—the Circulation of the Blood—how Temperature is maintained; the Lungs and the general process of Respiration; the Secretory and Excretory Organs—the functions performed by these; the Nervous System—Functions of the Cerebrum—of the Cerebellum—of the Spinal Cord—Reflex actions—Sensibility and Sensation—the Special Senses.

Second Bachelor of Science Examination.—(*Section A*) *Mathematics and Natural Philosophy*: *Mathematics*: The candidate will be subjected to a general examination in Geometry, Trigonometry, Algebra, Analytical Geometry, and the elements of the Differential and Integral Calculus, and to a special examination on three or more subjects selected by the candidate from the following list. A note of the special subjects selected must be submitted for approval, addressed to "The Professor of Mathematics, St. Andrews," six weeks previous to the examination. (1) Algebra, Todhunter's Larger Work; (2) Plain Trigonometry, Todhunter's Larger Work; (3) Spherical Trigonometry, Todhunter, chaps. i.-viii. inclusive; (4) Theory of Equations, Todhunter, chaps. i.-xxi. omitting chaps. ii., xi., and xiv.-xvii; (5) Analytical Geometry of Two Dimensions, Salmon, chaps. i., ii., v., vi., x.. xi., xii., with the easier parts of iii., iv., vii., viii., ix., or Todhunter, chaps. i.-xiv.; (6) The Elements of Analytical Geometry of Three Dimensions; (7) Elements of Determinants, as in Salmon's Lessons in Higher Algebra, chaps. i.-vii., or Todhunter's Theory of

Equations, chaps. xxv., xxvi., xxvii.; (8) the Differential and Integral Calculus as based on the Doctrine of Limits; (9) Elements of Quaternions, Kelland and Tait, chaps. i.-ix. N.B.—The candidates will be tested as much as possible for soundness of elementary knowledge; extensive reading is of secondary importance. It is not imperative that the candidate should read the books above mentioned; others covering much the same ground may be substituted. *Natural Philosophy*: The candidate will be subjected to a general examination in Dynamics and Experimental Physics, and to a special examination on two or three books, such as the following, to be selected by the candidate, and subject to the approval of the Professor. The list to be sent to "The Professor of Natural Philosophy, St. Andrews," six weeks previous to the examination. (1) Thomson and Tait's Elements of Natural Philosophy; (2) Tait and Steele's Dynamics of a Particle; (3) Todhunter's Statics; (4) Routh's Rigid Dynamics; (5) Newton —three sections; (6) Parkinson's Optics; (7) Lloyd's Lectures on the Undulatory Theory of Light; (8) Airy's Tract on Light; (9) Balfour Stewart on Heat; (10) Clerk-Maxwell on Heat; (11) Deschanel's Natural Philosophy; (12) Lamb's Treatise on the Motion of Fluids. Candidates who have passed with First-class Honours in the department of Mathematics for the degree of Master of Arts in this University will be exempted from the general examination; but they must satisfy the examiners that they have been continuing their studies by professing one of the above-named special subjects or an equivalent subject. (*Section B*) *The Physical Experimental Sciences*: Candidates will be required to show considerable familiarity with the processes required for the determination of physical constants—such as, for example, the Specific Heat, the Specific Inductive Capacity, the Thermic and Electric Conductivity of a substance; the Velocity of Light, or of Sound; the Magnetic dip, variation, and horizontal Intensity, &c. (*Section B or C*) *Chemistry*: The subjects for this examination will be the same as for the First Bachelor of Science examination, but carried out in greater detail. Additional subjects will be: the Atomic Theory; Specific Heat; Allotropism and Dimorphism; the Optical properties of Crystals; and Chemical Physics. (*Section D*) *Zoology* (including Systematic Palæontology): The same subjects as for the First Bachelor of Science examination, but carried out in greater detail. (*Section C or E*) *Geology* (including Historical Palæontology): The same subjects as for the First Bachelor of Science examination, but carried out in greater detail. (*Section D or E*) *Physiology*: The candidate will be examined in the subjects of the First Bachelor of Science examination, but in greater detail. In addition, he will be expected to show a

knowledge of the processes of Reproduction and Development. (*Section E*) *Botany*: The Elementary Tissues of Plants, their structure, chemical constituents, contents, and mode of development; the Elementary Anatomy and Morphology of the Flowering Plants (Phanerogams); the Elementary Anatomy and Morphology of the Flowerless Plants (Cryptogams); the Processes of Nutrition and Reproduction in Plants; the Classification of Plants, and the characters of the great classes of the Vegetable Kingdom; the characters of the principal Natural Orders of Plants; the Geographical Distribution of Plants.

Doctor of Science Examination.—Mathematics: *Natural Philosophy*: Candidates are required to pass a *searching* examination in *one* of the following subjects or groups of subjects (in all its details), and to show more than a mere elementary knowledge of at least *two* others. A. *Applied Mathematics*: 1. Abstract Dynamics, including Kinematics. 2. Acoustics and Theory of Light. 3. Conservation of Energy, including the Dynamical Theory of Heat. 4. Electricity, including the mathematical theories of Static and Voltaic Electricity, Induction, Magnetism, and Electro-Magnetism. 5. Physical Astronomy, including the Lunar and Planetary Theories, the Figure of the Earth, Precession, and Nutation. B. *Experimental Physics*: 6. Properties of Matter. 7. Sound and Light. 8. Heat and Energy (generally). 9. Electricity, Magnetism, &c. *Chemistry*: The candidate will be required to pass a searching examination in the general principles of Chemical Philosophy, in the Chemistry of the ores, of the metals, and in the Chemical Technology of Inorganic Substances, as well as in the application of the principles of Chemistry to various practical purposes (*e.g.*, the principles of ventilation, and the disinfecting, lighting, and heating of apartments). *Zoology and Systematic Palæontology*: The principal special Modifications, morphological and physiological, of the leading Groups of Animals, both living and extinct. Also, the leading phenomena of reproduction and development throughout the various classes of the Animal Kingdom. The candidate must submit an original thesis upon some Zoological subject selected by himself. *Geology and Historical Palæontology*: The candidate will be required to show a thorough knowledge of the leading facts of Geological Science, as illustrated both by the British Islands and by foreign countries. In addition to a practical examination, conducted by means of actual specimens of rocks and fossils, the candidate must submit an original thesis upon some Geological subject selected by himself. *Physiology*: In addition to a searching examination in general Physiology, the candidate will have to show himself to be fully acquainted with Practical and Experimental Physiology. He will also

have to present an original thesis on some subject in Physiology, to be selected by himself, and this thesis must be approved by the examiner.

For *Graduation in Medicine — See* "Guide to the Medical Profession."*

Graduation in Divinity (*B.D.*).

The following are the provisional regulations adopted by the Senatus Academicus for the degree of B.D.:

1. Masters of Arts of this or of any other university, who have completed their Theological course at this or any other Scottish university, shall be admitted to examination for the degree of B.D., on producing satisfactory evidence to the above effect.

2. Masters of Arts who have completed a regular course of Theological study in connection with the denomination to which they belong shall be admitted to examination for the degree on producing satisfactory evidence to that effect.

3. Each candidate for the degree shall, before admission to the examination, pay a fee of £3 3s.

4. The examination shall be conducted by the professors of the Theological Faculty with the assistance of two professors of the Faculty of Arts.

5. The examination may be taken at two separate periods, the first of which shall not be earlier than the commencement of the candidate's third session of regular attendance, provided he shall have concluded his attendance on the classes of the professor in whose department he proposes to be examined.

6. The examinations shall embrace the subjects taught in the several classes in the Theological Faculty.

7. All Bachelors of Divinity of this university shall be at liberty to offer themselves for the degree of D.D. eighteen years after they have obtained the degree of B.D., on writing such a thesis as may be prescribed by the Faculty of Divinity.

Honorary Degrees (*D.D. and LL.D.*).

The degrees of Doctor of Laws and Doctor of Divinity are conferred *honoris causâ tantum* on such persons as may be selected by the Senatus Academicus for distinguished eminence in the professions to which they belong.

Ceremonial of Graduation.

All candidates, except for Honorary degrees, who are proposed by the Faculties as qualified, must before their admission to degrees be present at the ceremonial of graduation. The degrees are publicly conferred by the Chancellor or the Vice-Chancellor of the University,

* "A Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

in name of the Senatus Academicus. The annual ceremonial of graduation takes place in the end of April.

Academic Costume.

1. *For the Masters of Arts.*—A gown of black silk or inferior stuff, still worn by the professors in several of the Faculties in the University of France, with cincture or belt of black silk, and a cap of black velvet, silk, or other material, after the fashion of that still worn in the University of France.

2. *For Doctors of Divinity, Laws, and Medicine.*—If on occasions of high ceremony a distinctive dress is deemed desirable, robes respectively of violet, scarlet, and crimson silk, or cloth with facings; cinctures and caps after the fashion used by the professors in these Faculties in the University of France.

3. The hoods of the graduates in all the Faculties to be after the pattern of those of the University of Cambridge, as most nearly resembling the form of the hood on the Rector's robe of this University, and of the following materials and colours: that of the M.A., black silk with red silk lining; that of the D.D., violet purple silk or cloth with white satin lining, to represent the old ermine lining; that of the LL.D., scarlet silk or cloth with white satin lining; that of the M.D., crimson silk or cloth with white satin lining.

4. The *Bachelors in the several Faculties* to be entitled to wear the hoods of their Faculties with the gown and cap of M.A.

St. Mary's College (University of St. Andrews)—Faculty of Theology.

The laws of the Church of Scotland require that, in order to be enrolled for the first year of his attendance, every student shall produce to the professor a certificate from the minister of the parish in which he has his usual residence—or in his absence, or during a vacancy in said parish, from some neighbouring minister—bearing that his character is suitable to his views; together with a certificate from the Examining Committee of the Church, stating that he has passed the examination prescribed by Act of Assembly 1873, which substituted an examination by a Synodic Committee in room of the former examination by presbyteries, in the case of students entering the Divinity Hall for the first time. In order to be enrolled for subsequent years, the student is required to produce two certificates—viz., one from the minister of the parish, and the other from the Presbytery within whose bounds he has chiefly resided during the last twelve months—stating that he has passed the examination required to be

undergone by students of Divinity before entering the Divinity Hall for the second and third sessions.

Every student must be enrolled for at least three sessions of regular attendance. Every student must also give regular attendance, during at least two sessions, on the classes of Church History, Hebrew, and Biblical Criticism. Every student is required to deliver six discourses —viz., a Latin exegesis, a homily, a critical exercise on some portion of the original text of the New Testament, a critical exercise on some portion of the original text of the Old Testament, a lecture, and a popular discourse; and it is expected that every student will deliver his first discourse during his second session at the latest, and the remainder of his discourses at such periods as may enable him to deliver the whole of them before the end of January of the last session of his discourse. The Professor of Divinity and Church History hears the homily, and the Professor of Divinity and Biblical Criticism the critical exercise on a portion of the New Testament and the Latin exegesis, and the Professor of Hebrew the critical exercise on a portion of the Old Testament.

Bursaries.

The following bursaries are not exclusively connected with the University of St. Andrews, but the students holding them have generally attended this University.

Menzies.—Four, value £50 each, tenable for four years, in any one of the Universities of St. Andrews, Glasgow, or Edinburgh. Preference first to the relations of the founder; next, to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Weem, and Fortingall; failing whom, any student who shall be found best qualified, may be appointed. Patrons—Sir Robert Menzies, Bart., and the ministers of the parishes of Dull, Weem, and Fortingall.

Dow.—The number of bursaries is two, of the annual value of about £10 each, and tenable for four years, "at any of the Scottish Universities, St. Andrews in preference." Restricted first to scholars natives of the parish, and educated at the parochial school of Kirkmichael Perthshire); failing whom, to scholars natives of the parish, and educated at the parochial school of Moulin. Patrons—Patrick Small Keir, Esq., of Kindrogan; James Small, Esq., of Dirnanean; and William A. Keir, Esq., younger, of Kindrogan.

Sharp.—It is of the annual value of £18, tenable for four years. The bursar must be a student of divinity of the Church of Scotland, and may prosecute his studies at any one of the Scottish universities. Preference first to applicants of the name of Sharp; next, to the name

of Sim; failing whom, any student being a native of or subject to the jurisdiction of the presbytery of Perth may be appointed. Patrons —the Presbytery of Perth.

The Ferguson Scholarships.—The number of scholarships is six, of the annual value of £80 each, and tenable for two years—one in Classics, one in Mathematics, and one in Mental Philosophy, including Logic, Metaphysics, and Ethics. The competitions take place in Glasgow in the month of October annually, and are open to all persons who have taken the degree of Master of Arts in one of the Universities in Scotland within two years immediately preceding; or who have passed the last of the ordinary examinations for that degree within the same periods, and who have not already gained one of these scholarships.

United College of St. Salvator and St. Leonard (St. Andrews University).

Fees.—First session: *Junior Humanity, £3 3s.; *English Literature, £1 1s.; *Junior Mathematics, £3 3s.; *Junior Greek, £3 3s. *Second session*: *2nd Humanity, £3 3s; *2nd Greek, £3 3s.; *2nd Mathematics, £3 3s.; *Logic, £3 3s. *Third session*: 3rd Greek, £1 1s.; Natural History, including Palæontology, £2 2s.; 3rd Humanity, £1 1s.; *Moral Philosophy and Political Economy, £3 3s.; 3rd Mathematics, £1 1s. *Fourth session*: *Natural Philosophy, £3 3s.; Chemistry, £3 3s.; Physiology, £2 2s.; Theory and Practice of Education, £1 1s.

It is recommended that the classes be attended in the order laid down in the above programme.

All students are required to matriculate at the commencement of the session with the Registrar of the University, at which time also the fees for the various classes must be paid to the Secretary of the College, from whom tickets will be obtained. The Matriculation fee is £1.

Subjects of Entrance examination for students who wish to begin their course with the classes of the second year:

1. *Mathematical Class.*—Arithmetic; Euclid, i. to iv., vi. and xi.; Algebra to binomial theorem inclusive.

2. *Greek Class.*—A book of Homer, and play of Euripides, as professed by the candidate, with parsing; Greek Grammar, including irregular verbs.

3. *Humanity Class.*—Cicero De Senectute, and Odes of Horace,

* Attendance on these classes is imperative for the M.A. degree; unless in the case of students who are freed from attending any one or more of the junior classes of Latin, Greek, or Mathematics, by having passed a preliminary examination.

books i., ii., with grammatical questions, and a passage of English narrative to be translated into Latin prose. The time and place of examination will be announced at the opening of the College session.

Higher Certificate for Women, with Title of L.L.A. (University of St. Andrews).

The University of St. Andrews grants a higher certificate to all candidates who pass in one or more of the subjects under-mentioned. The following are the conditions of examination: I. In each subject there is a Pass and an Honour standard. II. The subjects are, for the most part, those taught in the University; but History, and the French, German, and Italian Languages and Literatures, have been added. III. The standard of attainment both for Pass and Honours is the same as that required for the M.A. degree in the subjects included in the University curriculum, the books provided, the questions set, and the hours of examination, being identical; and in the subjects not at present included in the University curriculum, the standard required is analogous. IV. Any candidate who passes in four subjects (one at least being a language), or gains Honours in any one subject, and passes in two more (one of the three being a language), will receive the title of Literate in Arts (L.L.A.). To women who propose to become teachers this title is equivalent to a diploma, or licence to teach, in the subjects in which they have passed, or taken honours. English counts as a language in this examination, if the Honours subjects are taken; but if English is the language selected, the candidate must pass in three additional subjects. V. Candidates are requested to observe the prominence attached by the University to the subjects necessary for the M.A. degree. In the event of these seven subjects being passed successfully, the University will indicate, in the certificate granted, the superior value of the title. The M.A. subjects are the first seven in the list. VI. One, two, three, or four subjects may be taken in each year; and should the candidate pass, she will obtain a certificate, which will count towards the title for the next year. VII. Candidates who fail in obtaining Honours may obtain a Pass in those subjects in which they have been examined for Honours, provided their papers are such as to satisfy the examiners. It is not necessary to take the Pass paper before attempting Honours. VIII. The present centres for examination are *St. Andrews, London, Halifax, Bristol, and Belfast.* Any other centres fixed by the Senatus will be announced to intending candidates. IX. The fee to be paid by candidates coming up to be examined for the first time is £2 2s.; but this fee is allowed to cover two years or periods of examination, whether the years are consecutive or not. The fee must be sent when the "form" of applica-

tion is returned. The fee should be paid by post-office order; if by bank draft, it should include 6d. for bank charges. X. Candidates who obtain the title of L.L.A. pay an additional fee of £4 4s. XI. Before selecting their subjects, candidates are requested to consult the time table for the year, so that they may not present themselves for examination in any two subjects arranged to be taken up at the same hour. No alteration of the time table can be made to suit the convenience of individual candidates. XII. In filling up the form of application, candidates must state whether they mean to take the Pass or Honours paper, in the subjects which they select. XIII. After 1883 no candidate will be admitted to the St. Andrews L.L.A. examination who does not hold the Local Examination certificate of a University. XIV. Those who have received the title of L.L.A., but who wish to add to the value of their certificate, may be examined in any subject not previously taken, and obtain an additional certificate, the fee to be paid for each subsequent examination being £1 1s.

Subjects of Examination.—For Pass.—1. *Latin Language and Literature*: (*a*) Livy, book xxi.; (*b*) Virgil, Æneid, book xi.; (*c*) Cicero, Pro Lege Manilia; (*d*) Passage from author not prescribed; (*e*) History, Geography, and Antiquities; (*f*) Grammatical Questions; (*g*) Latin Prose Composition. 2. *Greek Language and Literature*: (*a*) Homer's Odyssey, book iv.; (*b*) Herodotus, book ii., omitting chaps. 15-27, 30-36, 48-53, 63-67, 86-93, 101-112, 126-135, 141-146, 161-172, 180-182—in all cases inclusive; (*c*) Sophocles, Philoctetes; (*d*) Cox's Greeks and Persians; (*e*) Cox's Athenian Empire; (*f*) Abbott and Mansfield's Greek Accidence; (*g*) Composition. 3. *Mathematics*: (*a*) Geometry—Euclid i.-iv., vi., xi. (props. 1-21), and book v., definition of Proportionals; the *principal* properties of the Parabola, the Ellipse, and the Hyperbola; (*b*) Algebra, up to and including Quadratic Equations, Arithmetical and Geometrical Progression, Logarithms, and the Binomial Theorem (positive integral exponent); (*c*) Elements of Trigonometry; (*d*) Analytical Geometry, up to and including the Circle; there will be two papers—one on (*a*) and (*c*), the other on (*b*) and (*d*)—in each of which, as well as in both, the candidate will be required to satisfy the examiners. 4. *Logic and Metaphysics*: (*a*) Fowler's Elements of Inductive Logic (Clarendon Press); (*b*) Jevons' Logic: (*c*) Hamilton's Reid's Intellectual Powers, books i.-iii.; (*d*) Locke's Essay, books i. and ii. 5. *Moral Philosophy*: (*a*) Aristotle's Nicomachean Ethics, books i.-iii.; (*b*) Mackintosh's Dissertation; (*c*) Schwegler's History of Philosophy, sections i.-xxii., or sections xxiii.-xlv., on which alternative questions will be set. 6. *English Language and Literature*; (*a*) Spalding's History of English Literature, parts i. and iii.;

(*b*) Milton's Areopagitica; (*c*) Hooker's Ecclesiastical Polity, book i.; (*d*) Shakespeare's Julius Cæsar (Clarendon Press Editions of Milton, Hooker and Shakespeare); (*e*) Morris's Outlines of English Accidence. 7. *Natural Philosophy*: (*a*) Elementary Mechanics, Astronomy, Heat, Light, Electricity, and Sound; *books recommended*—(1) Ganot's Physics, (2) Deschanel's Natural Philosophy, (3) Thomson and Tait's Elements of Natural Philosophy, (4) Herschel's Outlines of Astronomy. 8. *Education*: (*a*) Carpenter's Mental Physiology; (*b*) Fitche's Lectures on Teaching; (*c*) Bain's Education as a Science. 9. *Political Economy*: (*a*) Smith's Wealth of Nations, books ii.-iv.; (*b*) Fawcett's Manual of Political Economy; (*c*) Marshall's Economics of Industry. 10. *French Language and Literature*: (*a*) Manuel de Littérature Française, par Dr. Charles Ploetz (London, David Nutt); (*b*) Gustave Masson's French Classics, vols. iii. and v. (Clarendon Press); (*c*) Translation from English into French; (*d*) Questions in French Grammar—Accidence and Syntax; (*e*) Brachet's Historical Grammar, pp. 1-88 (Clarendon Press). 11. *German Language and Literature*: (*a*) Goethe's Torquato Tasso; (*b*) Lessing's Nathan der Weise; (*c*) Schiller's Die Jungfrau von Orleans; (*d*) Vilmar's Geschichte der deutschen Literatur, part ii. (Neue Zeit); (*e*) Grammar and Composition. 12. *Italian Language and Literature*: (*a*) Dante's Inferno, i.-x.; (*b*) Tasso's Gerusalemme, canto i.; (*c*) Manzoni's I promessi Sposi; (*d*) Hallam's History of Literature in Europe, part i., chaps ii. and iii.; (*e*) Grammar and Composition. 13. *Comparative Philology*: (*a*) Max Müller's Lectures on the Science of Language (first series); (*b*) Peile's Primer; (*c*) Whitney's Life and Growth of Language (International Series). 14. *History*: (*a*) Gibbon's Decline and Fall of the Roman Empire, chaps. xxxi.-xlvi; (*b*) Bryce's Holy Roman Empire; (*c*) Green's Short History of the English People. 15. *Chemistry*: (*a*) Cooke's First Principles of Chemical Philosophy; (*b*) Galloway's First and Second Steps; (*c*) Miller's Chemistry. 16. *Mineralogy*: (*a*) Nicol's Mineralogy; (*b*) Brush's Determinative Mineralogy; (*c*) Dana's Mineralogy. 17. *Physiology*: (*a*) Huxley's Elementary Lessons in Physiology; (*b*) Kirke's Hand-book of Physiology; (*c*) Dalton's Treatise on Human Physiology. 18. *Botany*: (*a*) Prantl's Elementary Text-book of Botany, translated by Vines (published by Sonnenschein and Allen); (*b*) Balfour's Outlines of Botany; (*c*) Hooker's Students' Flora of the British Isles. 19. *Zoology*: (*a*) Nicholson's Manual; (*b*) Rolleston's Forms of Animal Life; (*c*) Huxley's Elementary Lessons in Physiology; (*d*) Huxley and Martin's Elementary Biology. 20. *Geology, Physical Geography and Palæontology*: (*a*) Green's Geology for Students; (*b*) Lyell's Students' Elements of Geology; (*c*) Page's Advanced Text-book of Geology;

(*d*) Nicholson's Life-History of the Earth; (*e*) Page's Advanced Text-book of Physical Geography. 21. *Theology*: (1) Müller's Christian Doctrine of Sin, books i. and ii.; (2) Thomson's (Archb.) Bampton Lectures on the Atonement; (3) Anselm's Cur Deus Homo; (4) Bull's Defensio Fidei Nic., sects. i., ii., cap. 1-8; or Dorner's Doctrine of the Person of Christ, 1st div., 1st and 2nd epochs; (5) Dr. Hill's Lectures, book iii. 22. *Biblical Criticism*: (1) History of the Canon of the Old and New Testament; (2) Authenticity of the Book of Daniel, or Authenticity of John's Gospel; (3) Critical Exposition of the Epistle to the Galatians, and of the 1st Epistle to the Corinthians; (4) Patristic Greek, Epistle of Barnabas (Zahn's edition). 23. *Church History*: (1) Scripture History; (2) Controversies in the fourth and fifth centuries regarding the Natures and Person of Christ; (3) the Causes and Principles of the Reformation in the sixteenth century, and History of the Reformation (Kurtz, vol. ii.). 24. *Hebrew*: (1) Psalms cvii. to cl.; or Hosea, Amos, and Micah, with grammatical and exegetical questions.

For Honours.—1. *Latin Literature*: (1) Tacitus, Annals, books i., ii., iii.; (2) Plautus, Captivi; (3) Lucretius, books i., ii.; (4) Virgil's Æneid, books x., xi., xii.; (5) Passages from Latin authors not prescribed; (6) Latin Composition; (7) Questions on History, Philology, and Antiquities. 2. *Greek Literature*: (1) Six Books of Iliad or Odyssey; (2) Two plays of Sophocles, and one of Æschylus, or an equal portion of Pindar; (3) two Books of Thucydides; (4) Demosthenes, De Coronâ, or an equal amount of Plato or Aristotle; (5) Translation from Greek authors not prescribed; (6) Greek Prose; (7) Questions on Philology, History, and Literature. 3. *Mathematics*: The candidate will be subjected to a general examination in Geometry, Trigonometry, Algebra, Analytical Geometry, and the elements of the Differential and Integral Calculus, and to a special examination on three or more subjects selected by the candidate from the following list. A note of the special subjects selected must be submitted for approval, addressed to the Professor of Mathematics, St. Andrews, six weeks previous to the examination: (1) Algebra, Todhunter's Larger Work; (2) Plane Trigonometry, Todhunter's Larger Work; (3) Spherical Trigonometry, Todhunter, chaps. i.-viii. inclusive; (4) Theory of Equations, Todhunter, chaps. i.-xxi., omitting chaps. ii., xi., and xiv.-xvii.; (5) Analytical Geometry of Two Dimensions, Salmon, chaps. i., ii., v., vi., x., xi., xii., with the easier parts of iii., iv., vii., viii., ix., or Todhunter, chaps. i.-xiv.; (6) The Elements of Analytical Geometry of Three Dimensions; (7) Elements of Determinants, as in Salmon's Lessons in Higher Algebra, chaps. i.-vii., or Todhunter's Theory of Equations,

chaps. xxv., xxvi., xxvii.; (8) the Differential and Integral Calculus as based on the Doctrine of Limits; (9) Elements of Quaternions, Kelland and Tait, chaps. i.-ix. *N.B.*—The candidates will be tested as much as possible for soundness of elementary knowledge; extensive reading is of secondary importance. It is not imperative that the candidate should read the books above-mentioned; others covering much the same ground may be substituted. 4. *Logic and Metaphysics*: (1) Thomson's Outlines of the Laws of Thought; (2) Mill's Logic, books iii. and iv.; (3) Locke's Essay on the Human Understanding, books iii. and iv.; (4) Selections from Berkeley, with Introduction, Notes, &c., by A. C. Fraser (Clarendon Press). 5. *Moral Philosophy*: (1) The Course of Greek Philosophy, Speculative and Moral; (2) Aristotle's Nicomachean Ethics; (3) Spinoza's Ethics; (4) Kant's Metaphysic of Ethics. 6. *English Literature*: (1) Shakespeare's Macbeth and As You Like It; (2) Milton's Comus and Samson Agonistes; (3) Addison, Selections from Papers in the Spectator, with notes by T. Arnold, M.A.; (4) Anglo-Saxon Reader in Prose and Verse, by H. Sweet (Clarendon Press); (5) Chaucer—the Prologue to the Canterbury Tales, the Knight's Tale, the Nonne Prestes Tale, edited by R. Morris (Clarendon Press); (6) Pope's Satires and Epistles (Clarendon Press). 7. *Natural Philosophy*: The candidate will be subjected to a general examination in Dynamics and Experimental Physics; and to a special examination on two or three books, such as the following, to be selected by the candidate, and subject to the approval of the professor. The list to be sent to the Professor of Natural Philosophy, St. Andrews, six weeks previous to the examination: (1) Thomson and Tait's Elements of Natural Philosophy; (2) Tait and Steele's Dynamics of a Particle; (3) Todhunter's Statics; (4) Routh's Rigid Dynamics; (5) Newton—three sections; (6) Parkinson's Optics; (7) Lloyd's Lectures on the Undulatory Theory of Light; (8) Airy's Tract on Light; (9) Balfour Stewart on Heat; (10) Clerk-Maxwell on Heat; (11) Deschanel's Natural Philosophy; (12) Lamb's Treatise on the Motion of Fluids. 8. *Education*: The candidate may either—A. Write a thesis on the best methods of teaching any one school subject. The thesis to contain not less matter than is equivalent to 32 pages of printing, octavo (250 words per page); and to be sent to the Professor of Education, St. Andrews, at least a fortnight before the date of examination. *Or, B.*—Profess any two of the following books: (1) Matthew Arnold's Higher Schools and Universities in Germany; (2) Schrader's Erziehung u. Unterrichts Lehre; (3) Herbert Spencer on Education. (N.B.—In filling up the "Form" of application, candidates must state whether

they are to write the thesis or take the examination.) 9. *Political Economy*: (1) Mill's Principles of Political Economy; (2) Cairnes's Essays in Political Economy; (3) M'Culloch's Principles of Political Economy. 10. *French Language and Literature*: (*a*) Staaff's La Littérature Française—the whole (three vols., 5th ed., Paris, Didier et Cie., Delagrave et Cie.); (*b*) Passage from author not prescribed; (*c*) Translation from English into French, or an Essay in French on a prescribed subject; (*d*) Brachet's Historical Grammar—the whole (Clarendon Press). 11. *German Literature*: (1) Schiller's Wallenstein (Piccolomini und Tod), and Geschichte des dreissigjahrigen Kriegs, book iv.; (2) Goethe's Götz von Berlichingen and Werther's Leiden; (3) Vilmar's Geschichte der deutschen Literatur; (4) Grammar and Composition. 12. *Italian Literature*: (1) Dante's Divina Commedia, Purgatorio, cantos 28-33—Paradiso, cantos 1-17; (2) Vasari, Vita di Giotto, Brunelleschi, Lionardo da Vinci; (3) Capponi, Storia della Republica di Firenze, 2nda edizione, tom. Imo; (4) Translation at sight from authors not prescribed—Composition; (5) Questions on Literature from Villari's History of Italian Literature, and from Burckhardt's Renaissance in Italy. 13. *Comparative Philology*: (1) Max Müller on the Science of Language, vols. i. and ii.; (2) Peil's Latin and Greek Philology; (3) Papillon's Manual of Comparative Philology; (4) Whitney's Language and its Study. 14. *History*: (1) Hallam's, Middle Ages; (2) Gibbon's Decline and Fall of the Roman Empire; chap. xxvi.-xlvii.; (3) Froude's History of England, chaps. xxxv.-li.; (4) Motley's Dutch Republic, parts i.-iii. 15. *Chemistry*: Any one of the three following subjects: (1) The Lighting, Heating, Ventilating, and Disinfecting of Houses; (2) The Chemistry of Foods; (3) Mineral or Commercial Analysis. *Books recommended*: (1) Tomlinson's Cyclopedia of Science; (2) Guide to the Food Collection of South Kensington Museum; (3) Noad's or Fresenius's Analysis. 16. *Mineralogy*: One or other of the following: (1) The modes of occurrence, and recognition of the natural products utilised in the Arts; (2) British Minerals and Ores. *Books recommended*: (1) Nicol's Mineralogy; (2) Greg and Lettsom's British Minerals. 17. *Physiology*: (1) Carpenter's Human Physiology (8th edition, by Power); (2) Dr. Austin Flint's Physiology of Man (abridged edition); (3) Frey on the Histology and Histo-Chemistry of Man; (4) Hermann's Elements of Human Physiology, translated by Gamgee. 18. *Botany*: (1) Vegetable Organography; (2) Vegetable Physiology; (3) Classification and Characters of the chief divisions of the Vegetable Kingdom; (4) Geographical Distribution of Plants; (5) An elementary knowledge of the Geological Distribution of Plants. *Books recommended*: (1) Prantl's Elementary Text-book, trans-

lated by Vines; (2) Balfour's Class-book of Botany. 19. *Zoology*: (1) The General Principles of Zoological Science; (2) The Morphology and Physiology of the Orders of the Animal Kingdom, with the distribution of these in space and time. *Books recommended*: (1) Nicholson's Manual of Zoology; (2) Huxley's Comparative Anatomy of the Invertebrata, and Comparative Anatomy of the Vertebrata. 20. *Geology and Physical Geography*: (1) The more important facts in Physical Geography which bear upon Geology (the constitution of the globe, the distribution of dry land and sea, mountains, volcanoes, earthquakes, phenomena of denudation, &c.); (2) The chief facts of Physical Geology (structure and formation of the crust of the earth, aqueous, volcanic, plutonic, and metamorphic rocks, divisional planes of rocks, folds, contortions, faults, unconformability, &c.); (3) the characters, divisions, and succession of the Geological Formations of Great Britain, and the more important Fossils by which they are distinguished. *Books recommended*: (1) Huxley's Physiography; (2) Green's Geology for Students; (3) Lyell's Student's Elements of Geology; (4) Nicholson's Manual of Palæontology.

University of Aberdeen.

Faculty of Arts.

The following are the Classes in this Faculty: Greek—Junior, Senior; Latin—Junior, Senior; English Language and Composition; Logic; Mathematics—Junior, Senior; Natural Philosophy—Junior, Senior (Div. 1—Div. 2); Practical Class—Moral Philosophy, Natural History. *Fee* for each junior class, £3 3s., and for each senior class, £2 2s. English Literature, £1 1s.

The *fee* for attending a senior class, without previous attendance on the junior class in the same subject, is £3 3s. The matriculation fee for each student attending any class in the University is £1.

A course of weekly lectures on the Evidences of Christianity is delivered every session to students of the fourth year. Students may combine, with their last session in Arts, attendance on one class in the Faculty of Medicine, which, together with a summer Medical session, constitutes an *annus medicus*. Medical students may thus obtain the degree of M.A. (which exempts them from all extra-professional examinations) by taking, before entering on their strictly professional education, what is virtually a course of three years, or, if they pass at the outset in the second year of the Arts Curriculum (see *Entrance Examination*) through a course of only two years.

Faculty of Divinity.

The following are the *classes* in this Faculty: Systematic Theology,

Oriental Languages, Church History, Biblical Criticism. *Fee* for each class, £1 11s. 6d.

The laws of the Church of Scotland require that, in order to be enrolled for the first year of his attendance, every student shall produce to the professor a certificate from the minister of the parish in which he has his usual residence, or in his absence, or during a vacancy in said parish, from some neighbouring minister, bearing that his character is suitable to his views; together with a diploma of Master of Arts, or certificates from the several professors of Philosophy under whom he has studied, from which it may be clearly ascertained that in some university or universities he has gone through a full course of Philosophy in some winter sessions of College preceding that in which the certificates are produced—it being understood that in the absence of a diploma of Master of Arts, the student shall produce certificates of having attended the following classes, viz., Latin, Greek, Logic, Mathematics, Moral Philosophy, and Natural Philosophy, in such order as is prescribed in the university at which he has studied. In addition to these, the student must produce a certificate from the presbytery within the bounds of which he chiefly resides, bearing that he has passed the prescribed examination before said presbytery in a satisfactory manner. In order to be enrolled for subsequent years, the student is required to produce the two certificates above referred to, viz., one from the minister of the parish, and the other from the Presbytery.

Faculty of Law.

The subjects of Scots Law and of Conveyancing are taken up during alternate winter sessions.

Classes and Fees.—Scots Law, £4 4s.; Medical Jurisprudence, £3 3s.; Matriculation fee payable to the Registrar, £1.

I. *Law.*—The Professor delivers two courses of lectures, one on Scots Law, every alternate winter session, and another on Conveyancing, the other alternate winter session; each session extending over five months. The lectures are delivered four days each week, and a fifth day is devoted to oral examinations. The fee for each course is £4 4s.

II. *Medical Jurisprudence.*—The Professor of Medical Jurisprudence is, by Ordinance of Universities' Commissioners, No. 75, a member of this Faculty as well as that of Medicine.

Faculty of Medicine.

The courses of lectures embrace: 1. Institutes of Medicine and Physiology—*fees*, for first attendance, £3 3s.; second, £2 2s.; Practical

Physiology, £3 3s. The Physical Laboratory is open daily for the prosecution of original research in Experimental Physiology, Physiological Chemistry and Histology, under the direction of the Professor. 2. Practice of Medicine—first attendance, £3 3s.; second, £2 2s. 3. Chemistry: systematic course—first course, £3 3s.; second, £2 2s. Practical course—first attendance, £3 3s.; second, £2 2s. 4. Anatomy: winter session—first course, £3 3s.; second, £3 3s.; Practical Anatomy and Demonstrations—each course, £2 2s. Summer session—£2 2s. A class is formed for the instruction of intending teachers in the Structure of the Human Body—*fee*, including admission to the course of Practical Anatomy and Demonstrations, £2 2s. 5. Surgery—first attendance, £3 3s.; second, £2 2s. 6. Materia Medica: systematic winter course—first attendance, £3 3s.; second, £2 2s. Summer course of Practical Pharmacy—£2 2s. 7. Midwifery (together with the Hygiene and Diseases of Infancy and Childhood): Practical instruction is given in the wards and outdoor department of the Hospital for Sick Children, and at the Dispensary and Lying-in Institution—first attendance, £3 3s.; second, £2 2s. 8. Medical Jurisprudence and Medical Logic—first attendance, £3 3s.; second, £2 2s. 9. Botany—first attendance, £3 3s.; second, £2 2s. 10. A course is also given on Natural History. For details of the several courses, see "Guide to the Medical Profession." *

Graduation in Arts.

1. The course of study necessary for the degree of Master of Arts (except in special cases mentioned below) extends over four winter sessions,† and includes attendance for not less than two sessions on the classes of Humanity, Greek, and Mathematics respectively, and attendance for not less than one session on the classes of English, Logic, Natural Philosophy, Moral Philosophy, and Natural History respectively.‡

2. Any student who, at the time of his entrance to the University, can satisfy the Professors in the Faculty of Arts, on examination, that he is qualified to attend the higher classes of Latin, Greek, and Mathematics, or any of them, may be admitted to such higher class or classes, without having previously attended the first or junior class or

* "A Guide to the Medical Profession: A Comprehensive Manual, conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

† The regular students in Arts are by ancient usage designated, according to the year of their attendance, Bajans, Semis, Tertians, Magistrands.

‡ The aggregate amount of fees for all the classes in this course is £29 8s. To this has to be added the Matriculation fee of £1 for each for the four years, £3 3s. as examination fees for graduation, and £1 for enrolment on the General Council, making a total of £37 11s. When a student is entitled, under the provisions of Section 2, to pass over the Junior classes of Latin and Greek, and graduate in three years, the total is £31 7s.; if to pass over the Junior Mathematical class also, the total is £29 5s.

classes in the same department. When a student has been thus admitted to the higher classes, *both* of Latin and Greek, without having previously attended the first or junior Latin and Greek classes, his course of study for the degree of Master of Arts may be completed within three winter sessions, instead of four.

3. In pursuing the course of study for the degree of Master of Arts, no student is permitted to pass from the junior to a higher class in any department unless the Professor is satisfied of his fitness to enter the higher class.

4. Candidates for the degree of Master of Arts must be examined on the subjects of instruction embraced in the course of study above prescribed. The examinations take place twice a year, at the beginning and close of the winter session. But in the departments of Logic, Moral Philosophy, and English Literature, and of Natural History, special notice must be given by candidates who desire to be examined at the beginning of the session.

5. Any student, who has completed his attendance on the Latin and Greek classes required in the prescribed course of study, may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. And, in like manner, any student, who has completed the attendance required in the prescribed course of study on the classes of Logic, Moral Philosophy, and English Literature, may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. And also, in like manner, any student, who has completed the attendance required in the prescribed course of study on the classes of Mathematics and Natural Philosophy, may be examined on these subjects at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. And also, in like manner, any student, who has completed the attendance required in the prescribed course of study on the class of Natural History, may be examined on that subject at any examination for degrees, although he has not completed his attendance on the other classes of the prescribed course. Students who satisfy the examiners, when so examined in Latin and Greek, or in Logic, Moral Philosophy, and English Literature, or in Mathematics and Natural Philosophy, or in Natural History, receive a certificate to that effect, and are not again examined on the same subjects, as a condition of taking the degree of Master of Arts.

6. Before presenting himself at any one of the three examinations in Latin and Greek, in Logic, Moral Philosophy, and English, and in

Mathematics and Natural Philosophy, a candidate must pay an *examination fee* of £1 1s. No further fee for admission to the degree of Master of Arts, or for a diploma, is payable beyond the sum of £3 3s. so paid at the examinations, and £1 for enrolment on the General Council.

7. Students, who have commenced their course of study at any of the Scottish universities, may complete their course and graduate in Arts in the University of Aberdeen—provided they produce certificates of their previous attendance satisfactory to the Senatus; and provided also that they attend classes during the last two sessions, at least, of their course, and that they pass all the required examinations in this University.

8. The degree of Master of Arts can be conferred only on persons who have complied with the conditions hereinbefore set forth, and can in no case be conferred *honoris causâ tantum*.

Graduation with Honours.—9. Students who have passed satisfactorily the examinations on the several subjects embraced in the prescribed course of study are entitled to receive the degree of Master of Arts without Honours; but they may, before taking a degree, offer themselves for examination with a view to graduation with Honours. Any student who desires to offer himself for examination with a view to graduation with Honours in any one or more departments may proceed to such examination without having previously passed the examination in such department or departments for the degree of Master of Arts without Honours; and if such student, in the opinion of the examiners, fails to attain the standard for Honours in any department, but attains to the standard of the examination for graduation without Honours, he shall be held to have passed in that department for the degree of Master of Arts, without Honours; but if, in any such department, he fails to attain to the standard of the examination for graduation without Honours, he shall not be entitled, until he shall have passed in that department, to the degree of Master of Arts. No person can be admitted to examination for Honours after he has ceased to be a matriculated student in attendance on a class or classes in the University for more than one winter session; but it is in the power of the Senatus Academicus in particular cases, on the ground of ill health or other sufficient cause, to dispense, as far as may be necessary, with this regulation.

10. There are four departments, in any one or more of which candidates for graduation with Honours may offer themselves for examination, viz.: (1) Classical Literature; (2) Mental Philosophy, including Logic, Metaphysics, and Moral Philosophy; (3) Mathematics,

including pure Mathematics and Natural Philosophy; and (4) Natural Science, including Geology, Zoology, Chemistry, and Botany.

11. In each of the first three of the above-mentioned departments, viz., in Classical Literature, in Mental Philosophy, and in Mathematics, there are two grades of Honour, each representing, as nearly as may be, a uniform standard of qualification, and denominated respectively the First Class and the Second Class; but in the department of Natural Science there is one class of Honours only. The names of the candidates entitled to Honours in each class, in the several departments, are arranged in alphabetical order.

Session, Class Examinations, and Prizes.—The Arts session begins in the end of October, and extends over twenty-one weeks. At the end of each session, examinations are held in the different classes in the Faculty of Arts, which all students are required to attend. These examinations are conducted in writing. The Senatus awards prizes to the most distinguished students. Only such students as attend regularly, perform the exercises of the classes, and pass the examinations at the close of the sessions, can claim certificates from the professors, or reckon their attendance as qualifying for a degree.

General Prizes and Scholarships.—There are also prizes awarded to those most distinguished in the examinations for Honours, viz., to the best Greek scholar, a *Simpson prize* of £65 or thereby; to the best Mathematical scholar, a *Simpson prize* of £65 or thereby; to the second in point of merit in Mathematics, a *Boxill prize* of £28; to the best scholar in Classical Literature and Mental Philosophy, a *Hutton prize* of £30; to the most distinguished candidate for Honours in the department of Natural Science, a *prize* of £10; to the best general scholar, the Gold Medal of the Magistrates and Town Council of Aberdeen; to the greatest proficient in Experimental Physics, the *Neil Arnott prize* of £35; to each of the best English and Latin scholars, a *Seafield gold medal*; to the best student in the Tertian or Magistrand Class in the department of Classical Philology, the *Jenkyns prize* of about £8.

Examinations for Honours.—No one can be examined for Honours unless he has passed all the examinations for the ordinary degree, subject always to the following provision:

Any student who desires to offer himself for examination with a view to graduation with Honours, in any one or more departments, may proceed to such examinations without having previously passed the examination in such department or departments for the degree of Master of Arts without Honours; and if such student, in the opinion of the examiners, fails to attain the standard for Honours in any department, but attains to the standard of the examinations for

graduation without Honours, he shall be held to have passed in that department for the degree of Master of Arts without Honours; but if, in any such department, he fails to attain to the standard of the examination for graduation without Honours, he shall not be entitled, until he shall have passed in that department, to the degree of Master of Arts.

Special Prizes in connection with the Examinations for Honours.—1. *Simpson Greek prize*, £65. 2. *Simpson and Boxhill Mathematical prizes* of £65 and £28. 3. *Hutton prize* of £30 or thereby—The examinations for Honours in Departments of Classical Literature and Mental Philosophy (A and B). 4. A *prize* of £10 will be given to the Magistrand who shall acquit himself the most creditably at the examinations for Honours in the Department of Natural Science (D). 5. *Town Council gold medal*—given to the most distinguished scholar at the termination of the Curriculum. 6. *Neil Arnott prize* of £35 or thereby—to the Magistrand who, having passed all his examinations for the degree, shall distinguish himself most in Experimental Physics. The examination will be partly oral, and will include all the subjects treated experimentally in the Junior, Senior, and Practical Natural Philosophy Classes, and, in addition, "Stewart's Elementary Treatise on Heat." 7. *Seafield gold medal for Latin*: Latin Subjects for Honours (A). 8. *Seafield gold medal for English*: Subject—English Literature from 1550 to 1630.

Graduation in Divinity.

Degree of B.D.—The following are the regulations relating to the degree of Bachelor of Divinity:

1. Candidates must be graduates of Arts of a Scottish university, or of any university whose degrees shall be recognised by the Senatus (with the approv l of the University Court), as sufficient for this purpose.

2. This degree shall be conferred only after the candidate shall have completed his Theological curriculum with a view to the Ministry of the Church or Denomination to which he belongs, and shall have produced satisfactory evidence to that effect; provided always that, in the event of the candidate not being a graduate in Arts of this University, he shall have given not less than two years attendance on Theological classes in this University.

3. Candidates who are members of the Church of Scotland must have attended the Divinity Hall in this University during one year, at least, of their Theological course.

4. Candidates must pass a satisfactory *examination* in the Evidences of Christianity, Systematic Theology, Church History, Biblical Criticism, and Hebrew.

5. Candidates may offer themselves for examination in Church History, Biblical Criticism, and Hebrew, at the commencement of their last Theological session, subject to the provisions of the next regulation.

6. Candidates may divide their examination into two parts; but unless they pass in at least two subjects at any one examination, the whole examination must be repeated. In the event of a candidate appearing for examination more than three times, he must, before being again admitted to examination, pay a second time the fee required by Regulation 9.

7. The degree is conferred on such persons as submit to the Senatus certificates of having passed the requisite examinations together with evidence that they have received licence or ordination.

8. Candidates must intimate to the Secretary of the Divinity Faculty when they propose to present themselves for examination; and this intimation must be made at least one month previous to the day named for the examination.

9. The *fee* for examination, payable in advance, is £3 3s.

Graduation in Medicine.

1. The Matriculation Register is open—for the winter session, on the last Wednesday of October; and for the summer session,* on the first Monday of May. On each occasion it is kept open for the space of fifteen days, after which no names can be entered unless a satisfactory reason be given to the Medical Faculty for the delay. 2. The degrees in Medicine granted by this University are: Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.)

Degrees of M.B. and C.M.—3. The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics.† The proficiency of students in these branches is ascertained prior to the commencement of their medical studies. 4. No candidate is admitted to a Professional examination who has not passed a satisfactory examination on at least two of the following subjects, in addition to the subjects mentioned above: Greek, French, German, Higher Mathematics, Natural Philosophy, Natural History, Logic, Moral Philosophy; and the examination on these subjects also, as far as possible, takes place before the candidate has entered on his Medical curriculum. V. A degree in Arts (not honorary) of any of the universities of the United Kingdom, or of any other university specially recognised by the University Court, exempts candidates from all extra-professional examinations. VI. No one can be admitted to the degrees of Bachelor of Medicine and Master in Surgery who has not been engaged in Medical and Surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by two courses of not less than one hundred lectures each, or by one such course, and two courses of not less

* The Medical Faculty recommend that the students of Medicine should commence the attendance in summer.

† For particulars as to the subjects of examination, see p. 409.

than fifty lectures each. VII. Every candidate for the degrees of Bachelor of Medicine and Master in Surgery must give sufficient evidence by certificates: 1. That he has studied each of the following departments of Medical science, namely: Anatomy, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine, or Physiology, Practice of Medicine, Surgery, Midwifery, and the Diseases peculiar to Women and Children,* during courses, including not less than one hundred lectures; Practical Anatomy, six months; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery, during courses of six months, or two courses of three months, the lectures being given at least twice a-week; Medical Jurisprudence, Botany, Natural History, during courses including not less than fifty lectures. 2. That he has attended for at least two years, either at Aberdeen or elsewhere, the Medical and Surgical practice of a general hospital, which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons. 3. That he has been engaged for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs, at the laboratory of an hospital or a dispensary, or that of a member of a Surgical college or Faculty, of a Licentiate of the London or Dublin Society of Apothecaries, or of a Member of the Pharmaceutical Society of Great Britain. 4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of an hospital, or the practice of a dispensary, or of a registered medical practitioner. VIII. The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to prescribed regulations as to time, place, and manner. IX. Every candidate for the degrees of Bachelor of Medicine and Master in Surgery must, at the examination term in which he proposes to graduate, lodge with the Dean of the Faculty of Medicine: 1. A declaration, in his own handwriting, that, on the day of graduation, he will have completed his twenty-first year, and will not be under articles of apprenticeship. 2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

Professional Examinations.—X. Professional examinations are held twice in each year, namely, in April and July, directly after the close of the winter and summer sessions. XI. Every candidate for the degrees of Bachelor of Medicine and Master in Surgery shall undergo three Professional examinations, which will be conducted both in

* Two courses of Midwifery, of three months each, will be reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

writing and *viva voce*, as follows: The first examination to include Botany,* Natural History, Chemistry, and Anatomy. The second examination to include Regional Anatomy, Institutes of Medicine, Materia Medica, and Surgery. The third examination to include Practice of Medicine and General Pathology, Clinical Medicine, Clinical Surgery, Midwifery, and Medical Jurisprudence. XII. The Medical examiners for graduation in Medicine are the Professors in the Faculty of Medicine, and, in addition, six persons appointed annually by the University Court. XIII. The degree of Surgery is not conferred on any person who does not at the same time obtain the degree of Bachelor of Medicine, nor is the degree of Bachelor of Medicine conferred on any person who does not also at the same time obtain the degree of Master in Surgery.

Degree of M.D.—XIV. The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, who is of the age of twenty-four years, and who has been engaged, subsequently to his having received the degree of M.B., for two years in attendance on an hospital, or in the Military or Naval Medical Service, or in Medical or Surgical practice. But the degree of Doctor of Medicine is not conferred on any person unless he be a graduate in Arts, or unless he shall, before or at the time of his obtaining the degree of Bachelor of Medicine, or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects, namely, French, German, Higher Mathematics, Natural Philosophy, and Natural History. Provided also that he shall lodge with the Dean of the Faculty of Medicine, or some other professor appointed by the Senatus, a thesis† composed by himself, to be approved by the Faculty of Medicine, on any branch of knowledge comprised in the Professional examinations for the degree of Bachelor of Medicine which he may have made a subject of study after receiving that degree.

Fees for Graduation.—XV. Each candidate for the degrees of M.D. and C.M. pays a fee of five guineas in respect of each of the first two Professional examinations, and a fee of ten guineas in respect of the third Professional examination—payable before examination. And every candidate for the degree of Doctor of Medicine pays in addition a fee of five guineas, exclusive of stamp duty.

* The natural orders of plants examined on for Degrees in Medicine are the following: Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Leguminosæ, Rosaceæ, Umbelliferæ, Rubiaceæ, Compositæ, Campanulaceæ, Solanaceæ, Scrophulariaceæ, Labiatæ, Primulaceæ, Polygonaceæ, Euphorbiaceæ, Cupuliferæ, Orchidaceæ, Liliaceæ, Graminaceæ, Coniferæ, Filices.

† The Theses for the April term must be lodged with the Dean by the first day of February and for the August term by the first day of June.

Exemption.—XVI. Candidates who may have begun their Medical studies before the first Tuesday of November, 1861, are entitled to graduate under the regulations applicable to medical students in force before that date.

Preliminary Examinations.—Part I. The examination on the following subjects takes place prior to the commencement of the Medical curriculum, viz.: I. *English*: Composition, Grammar, and Writing to Dictation. II. *Latin*: The first book of Cæsar's Commentaries de Bello Gallico; the third book of Virgil's Æneid; with Grammatical Questions. III. *Arithmetic*: The Common Rules, vulgar and decimal fractions, and proportion. IV. *Elements of Mathematics*: The first three books of Euclid; Algebra as far as, and inclusive of, simple equations. V. *Elements of Mechanics*: Hamblin Smith's Elementary Statics, and Hamblin Smith's Elementary Hydrostatics, chap. i. *Part* II.—*Additional subjects*—On *two* of which, at the option of candidates, a further examination must be undergone, *before admission* to the *First Professional* examination: I. *Greek*: Xenophon, Anabasis book ii.; with Grammatical Questions. II. *French*: Voltaire's Histoire de Pierre le Grand. III. *German*: Schiller's Wilhelm Tell. IV. *Higher Mathematics*: Euclid, books i. to vi. inclusive. Plane Trigonometry, Solution of Triangles, Quadratic Equations, Binomial Theorem, Logarithms. V. *Natural Philosophy*: Balfour Stewart's "Elementary Physics" recommended. VI. *Natural History*: General Classification of the Animal Kingdom; Characters and Sub-divisions of the Vertebrata (Nicholson's "Text Book of Zoology" recommended). VII. *Logic*: (Jevons' "Elementary Lessons in Logic" recommended). VIII. *Moral Philosophy*: (Reid's "Active Powers" or Wayland's "Elements of Moral Science" recommended).

Honorary Degrees in Divinity and Law.

The degrees of D.D. and LL.D. are at present only conferred as honorary degrees, the one for professional distinction, the other for literary or scientific eminence. Except in extraordinary cases, these degrees are conferred only on those who have previously graduated in Arts in this University.

Graduation Ceremonial and Academic Costume.

The degrees in Arts, Law, and Divinity, are conferred in April, and those in Medicine in April and August in each year. Graduates must provide themselves on these occasions with the academical costume—gown and hood—proper to their degree. The gowns are the same in all the Faculties, viz., black silk or stuff. The distinctive part of the costume is in the hoods.

Bursaries, Scholarships, and Prizes.

I. BURSARIES IN THE FACULTY OF ARTS.

(A.) *Competition Bursaries.*

Found. No.	Year.	Name of Bursary.	No. of Burs.	Years.	Annual Value.	Aggregate Annual Value.
10	1529	Elphinstone	6	4	£10	60 0 0
5	1616	Cargill	8	4	£20	160 0 0
34	1633 1770	Reid and Cruden	1	4	—	20 0 0
7	1644	Crombie	8	4	£15	120 0 0
38	1655	Ross	1	4	—	20 0 0
36	1659	Rolland	4	4	£25	100 0 0
28	1677—95	Milne and Fraser	1	4	—	20 0 0
13	1677 1787	Gordon and Cuming	1	4	—	20 0 0
26	1678	Melvill	2	4	£15	30 0 0
1	1691	Adam	9	4	3 of £20 6 of £15	150 0 0
2	1691 1706	Adam and Davidson	1	4	—	10 0 0
33	1691	Park	1	4	—	10 0 0
11	1692	Fullerton	14	4	5 of £20 9 of £15	235 0 0
44	1699	Watson	1	4	—	10 0 0
12	1706—38	Galloway and Garden	1	4	—	10 0 0
32	1723	Ogilvie	1	4	—	10 0 0
41	1741—46	Smith and Forbes	1	4	—	10 0 0
30	1769	Moir	14	4	4 of £20 10 of £15	230 0 0
39	1794	Ruddiman	1	4	—	9 0 0
29	1801	Mitchell	6	4	£10	60 0 0
18	18—	Johnston	1	4	—	11 0 0
17	1801	Hutton	13	4	4 of £18 4 of £16 4 of £14 1 of £12	204 0 0
15	1808	Henderson	2	4	1 of £12 1 of £10	22 0 0
35	1807	Mather	4	4	£15	60 0 0
42	1809	Stuart	5	4	1 of £14 1 of £13 2 of £11 1 of £9	58 0 0
27	1810	Middleton	1	4	—	16 0 0
23	1817	Macpherson	5	4	4 of £20 1 of £10	90 0 0
8	1827	Davidson	3	4	£13 10s.	40 10 0
16	1827	Hogg	1	4	—	14 0 0
24	1829	Martin	3	4	£11	33 0 0
19	1838	Kinloch	3	4	1 of £14 2 of £10	34 0 0
40	1838	Simpson	6	4	£35	210 0 0
3	1848	Bruce (N.)	1	4	—	9 0 0
4	1853	Campbell	8	4	4 of £18 4 of £14 10s.	130 0 0
6	1860	Clerihew	1	4	—	5 0 0
9	1866	Dingwall, Alex.	2	4	£21	42 0 0
37	1868—70	Rose	7	4	£30	210 0 0
35	1872	Reidhaven Majority	1	4	—	14 0 0
31	1874	Munro	1	4	—	20 0 0
43	1874	Torrie	1	4	—	30 0 0
20	1874	Lendrum	2	4	£15	30 0 0
14	1875	Greenshares	8	4	£30	240 0 0
21	1876	London Morayshire Club	1	4	—	*16 0 0
22	1876	Mackay	1	4	—	35 0 0
			163			£2987 10 0

* As nearly as the amount averages.

BURSARIES IN THE FACULTY OF ARTS—*Continued.*

(B.) *Presentation Bursaries.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable.	Annual Value.	Aggregate Annual Value.	Patrons.
					£ s. d.	£ s. d.	
20	1648	Leys	1	4	——	15 0 0	Sir Robert Burnett, Bart, of Leys.
10	1656	Drum.....	8	4	40 0 0	320 0 0	Alex. Forbes Irvine, Esq., of Drum.
28	1678	Redhyth	16	4	22 10 0	360 0 0	The Earl of Seafield.
35	1688	Turner	1	4	——	11 2 0	Major John Turner, of Turner-hall.
			1	4	——	11 2 0	The Magistrates and Town Council of Aberdeen.
3	1706	Braco.....	1	4	——	13 10 0	The Earl of Fife.
4	1711	Burnett†	4	4	9 10 0	38 0 0	Sir Robert Burnett, Bart, of Leys.
27	1714	Ramsay.....	4	4	24 0 0	96 0 0	Sir Al. E. Ramsay, Bart.
15	1716	Glenfarquhar (Kintore)	1	4	——	16 16 0	The Earl of Kintore.
16	1716	Glenfarquhar (Ramsay)	1	4	——	16 16 0	Sir Al. E. Ramsay, Bart.
18	1724	Greig	1	4	——	6 0 0	A. Robertson, Esq., late of Foveran.
8	1725	Denoon.....	1	4	——	5 0 0	Presbyteries of Tain and Dornoch.
22	1728	Mackintosh.....	1	4	——	5 0 0	The Mackintosh of Mackintosh.
14	1730	Fraser	1	4	——	25 0 0	The Provost, 4 Bailies, 3 Ministers, and 3 Delegates of the Presbytery of Inverness.
26	1762	Paterson	1	4	——	14 0 0	The Principal of the University.
23	1764	Lorimer (Cullen)...	2	4	16 0 0	32 0 0	Moderator and Kirk Session of Cullen.
5	1791	Coll	1	4	——	16 10 0	The Chancellor of the University.
36	1791	Udny-Duff	1	4	——	14 0 0	The Earl of Fife.
21	1793	Lorimer (Mortlach)	1	4	——	14 0 0	The Moderator and Kirk-Session of Mortlach.
17	1795	Grant.....	1	4	——	11 10 0	The Earl of Seafield.
13	1804	Findlay.....	8	4, and 2 more in Divinity or Medicine	10 0 0	30 0 0	Trustees of Colonel George Moir, of Scotston, C.B.
1	1804	Adam (Fordyce)	1	4	——	9 0 0	The Minister of Fordyce.
24	1806	Macleod	1	4	——	10 0 0	The Senatus.
33	1809	Stuart	2	4	about £20	40 0 0	The Presbytery of Fordyce.
7	1815	Cruickshank ...	1	4	——	15 0 0	The Minister of Monquhitter.
		Carry forward..	57		£	1145 6 0	

*The Burnett Bursaries are meantime at the desire of the patron awarded by competition.

Presentation Bursaries (Faculty of Arts)—Continued.

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable.	Annual Value.	Aggregate Annual Value.	Patrons.
					£ s. d.	£ s. d.	
		Brought forward	57			1145 6 0	
7	1815	Cruickshank ...	1	4	—	18 15 0	The Minister of New Deer.
30	1835	Scott (Bp. of Aberdeen)	1	4	—	22 0 0	The Bishop of Aberdeen.
31	1837	Scott (Presbytery of Strathb'gie)	1	4	—	16 0 0	The Presbytery of Strathbogie.
19	1838	Launie	2	4	8 0 0	16 0 0	The Trustees of the Founder.
6	1858	Cowe	1	4	—	7 0 0	Geo. Wallace, solicitor, Fraserburg, and others, Trustees of Founder.
9	1862	Dingwall, Geo.	1	4	—	15 0 0	The Presbytery of Turriff.
11	1863	Ettles	1	4	—	21 10 0	The Sheriff-Substitute and 2 Ministers of Elgin.
12	1863	Do.	1	5	—	20 0 0	The Sheriff-Substitute and the 1st, 2nd, and 3rd Ministers of Inverness.
	1869	Balmoral	3	4	30 0 0	90 0 0	Her Majesty the Queen.
2	1869	Smith (Dr. W.)	1	4	—	15 0 0	Robert Smith, Advocate, and others, Trustees of Founder.
32	1869	Sturm	2	5	33 0	66 0 0	The Minister and Deacons of E. C. of Mortlach.
29	1882	Bunoy*	2	—	about £9	18 0 0	J. P. Cumine, advocate, and others, Trustees of Founder.
			74			£1470 11 0	

(c). *Bursaries under the patronage of the Incorporated Trades of Aberdeen.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable.	Annual Value.	Aggregate Annual Value.
1	1655	Guild	3	4	£15 to £30	
2	1736	Moir	1	—	—	

Bursars in Arts are required to attend all the classes necessary to

* These bursaries may be held by students in any of the Faculties.

qualify them for taking a degree. Those whose curriculum extends over four years must attend three classes during each of their first three years, and they must attend the Junior Greek and Junior Latin in their first year, the Junior Mathematics in their second year, the Natural Philosophy in their third year, and the Moral Philosophy in their fourth year; also, they must attend the Logic class previous to their fourth year. Those whose curriculum extends only over three years must attend not fewer than three classes during each of their first two years, and they must attend the Junior Mathematics (unless exempt from attendance on that class) in their first year, the Natural Philosophy in their second year, and the Moral Philosophy in their third year; also, they must attend the Logic class previous to their third year.

No student is allowed to hold at one time more than one bursary or scholarship, except in cases provided for by the Regulations.

(A.) *Conditions of Bursaries open to Competition.*—1. *Adam*: The number of bursaries is three of the annual value of £20 each, and six of £15 each. Open for competition to students entering their first or second session, and who have not for more than one session been students in the Faculty of Arts in any of the Scottish universities. Tenable for four years, provided the student proceed through the curriculum in Arts, pass the examinations for the degree of M.A., and do not discontinue attendance as a student in Arts. The Senatus may appoint, in the event of a vacancy, for the remainder of any period of four years unexpired. 2. *Adam and Davidson*: Annual value, £10. Open for competition to students entering their first or second session, and tenable for four years, on the same conditions as are mentioned under the last foundation. 3. *N. Bruce*: One bursary of the annual value of £9 or thereby, tenable for four years. 4. *Campbell*: The number of bursaries is eight, whereof four are of the value of £18 each, and four of the value of £14 10s. each, or thereby, tenable for four years. 5. *Cargill*: The number of bursaries is eight, of the annual value of £20 each, tenable for four years. 6. *Clerihew*: One bursary of the value of £5 or thereby, tenable for four years. 7. *Crombie*: The number of bursaries is eight, of the annual value of £15 each, tenable for four years. 8. *Davidson*: The number of bursaries is three, of the annual value of £13 10s. each or thereby. Preference to relations of the founder, and to the names of Davidson, Knowles, Sim, Ramsay, Simson, Cooper, Collie, Thom, Forbes, Gerrard, or Gordon. 9. *A. Dingwall*: The Senatus has fixed the number of bursaries at two, the value at £21 each. Boys of the name of Dingwall or Dow preferred. 10. *Elphinstone*: The number of bursaries is six, of the

annual value of £10 each—tenable for four years. 11. *Fullerton*: The number of bursaries is fourteen in all, five of the annual value of £20 each, and nine of £15 each. Open for competition to all students entering their first or second session, and tenable for four years, under the conditions before mentioned. (See *Adam.*) 12. *Galloway and Garden*: Annual value, £10. Open for competition to all students entering their first or second session, and tenable for four years under the conditions before mentioned. (See *Adam.*) 13. *Gordon and Cuming*: One bursary of £20, tenable for four years. 14. *Greenskares*: The number of bursaries to be as many of £30 each as the free annual rents of the estate of Greenskares, in the parish of Gamrie and county of Banff, will enable the Senatus to bestow. To be tenable for four years in the Arts classes. The selection of bursars to be confined to scholars born in any of the parishes and educated at any of the schools of the county of Banff, and who are to enter on the first year of their studies in the University. To be selected after competitive examination at annual competition, but only if the Senatus deem worthy, and unable without such bursary to prosecute their studies. The balance at the end of any session undisposed of to be invested and the interest applied in paying additional bursaries. The present number will probably be eight. 15. *Henderson*: The number of bursaries is two—one of the annual value of £12 and one of £10 or thereby—tenable for four years. 16. *Hogg*: Annual ualue, £14, and tenable for four years. To be given by competition, except when relations of the founder or students of the name of Hogg apply and are found qualified. 17. *Hutton*: The numaber of bursaries is thirteen, whereof four are of the annual value of £18 each, four of £16 each, four of £14 each, and one of £12. Open for competition to students not under fourteen years of age, and natives of the British Empire—tenable for four years. 18. *Johnston*: One bursary of the annual value of £11, tenable for four years. 19. *Kinloch*: Three bursaries—one of the annual value of £14, and two of £10 each or thereby, tenable for four years. 20. *Lendrum*: Two bursaries of the annual value of £15 each, or thereby, and tenable for four years in the Arts curriculum. To be competed for, and preference to be given (1) to students who are the sons of parents residing in the parishes of Cruden or Slains, or in the landward part of the parish of Peterhead, or who have received their elementary education, either in whole or in part, in either of the said parishes; such as are the sons of parents residing in the parish of Cruden, or who have received their elementary education, either in whole or in part, in that parish, to have in all cases of equality a preference; (2) to such as are the sons of parents residing in the town of

Peterhead, or who have received their education, in part at least, in said town; and (3) failing those above mentioned, in certain circumstances, to the best qualified student without restriction. 21. *The London Morayshire Club bursary*: Annual value £16 or thereby, tenable for four years. Open for competition to any student entering his first year who is a native or son of a native of the county of Moray, or the son of a member of the London Morayshire Club; and to students who have resided in the county and attended any public school therein during a period of eight years. 22. *Mackay's Gift*: The interest on £1200. Open for competition to students who are natives or residenters in the parish of Reay, and tenable for four years in the Faculty of Arts under the usual conditions, and should the bursar complete his curriculum in Arts while he holds the bursary, and proceed to study in any other Faculty of the University, he may retain the bursary for the regular period of study in such Faculty. 23. *Macpherson*: The number of bursaries is five, whereof four are of the annual value of £20 each, and one of £10 or thereby, tenable for four years. Candidates are required to lodge with the Secretary of the Senatus, on or before the first day of the annual competition, certificates from a Gaelic minister as to their knowledge of the Gaelic language. 24. *Martin*: The number of bursaries is three, of the annual value of £11 each, or thereby, tenable for four years. 25. *Mather*: The number of bursaries is four, of the annual value of £15 each, tenable for four years. 26. *Melville*: The number of bursaries is two, of the annual value of £15 each, tenable for four years. 27. *Middleton*: One bursary of the annual value of £16 or thereby, tenable for four years. Preference to the names of Middleton and Sim. 28. *Milne and Fraser*: One bursary of £20, tenable for four years. 29. *Mitchell*: The number of bursaries is six, of the annual value of £10 each, tenable for four years. 30. *Moir*: The number of bursaries is fourteen—four of the annual value of £20 each, and ten of £15 each. Open for competition to all students entering on their first or second session, and tenable for four years, under the same conditions as the Adam bursaries. 31. *Munro*: One bursary of the annual value of £20, tenable for four years. Open for competition, and tenable only by youths born within the bounds of the synods of Glenelg, Sutherland, and Caithness, or of the presbytery of Mull, and certified by a minister officiating in Gaelic to be familiarly acquainted with that language; the certificates to be transmitted to the Secretary of the Senatus on or before the Saturday previous to the bursary competition. The balance of revenue of the fund to be accumulated for the foundation of another bursary of the same amount and on the same conditions. 32. *Ogilvie*:

One bursary of the annual value of £10, tenable for four years. 33, *Park*: One bursary of the annual value of £10, tenable for four years. 34. *Reid and Cruden*: One bursary of £20, tenable for four years. 35. *Reidhaven Majority bursary*: One bursary of the annual value of £14 or thereby, tenable for four years. Open for competition to sons of Lord Seafield's tenants or feuars in the parishes of Banff, Bellie, Boharm, Boyndie, Cullen, Deskford, Keith, Ord, Portsoy, and Rathven. 36. *Rolland*: The number of bursaries is four, of the annual value of £25 each, tenable for four years. 37. *Rose*: The number of bursaries is seven, of the annual value of £30 or thereby, tenable for four years. Open for competition. Students educated in, or coming from, the burgh and parochial schools of Banff, or the parochial schools of Ardclach or Boyndie, *cæteris paribus*, to be preferred, and competitors (1) of the name of Rose and (2) natives of the parishes of Ardclach, Banff, and Boyndie, preferred to others in *pari casu* in other respects 38. *Ross*: One bursary of £20, tenable for four years. 39. *Ruddiman*: One bursary of the annual value of £9 or thereby, tenable for four years. 40. *Simpson*: The number of bursaries is six, of the annual value of £35 each. The bursars to be fourteen years of age, and natives of the British Empire, and preference, *cæteris paribus*, to be given to the names of Simpson or Thomson. 41. *Smith and Forbes*: Annual value £10. Open for competition to students entering their first or second session, and tenable for four years on the conditions before mentioned. (See *Adam*.) 42. *Stuart*: The number of bursaries is five, whereof one is of the annual value of £14, one of £13, two of £12 or thereby, and one of £9 or thereby, tenable for four years. Preference, first to the name of Stuart and then to that of Simpson. 43. *Torrie*: One bursary of the annual value of £30 or thereby, tenable for four years. Open for competition to students in Arts for proficiency in Latin. 44. *Watson*: One bursary of the value of £10, tenable for four years.

(B.) *Conditions of Bursaries under Private Patronage.*—1. *James Adam*: One bursary, of the annual value of £9, or thereby, tenable for four years. Patron—the Minister of Fordyce. 2. *Balmoral*: They are three in number, of the value of £30 each, and are tenable for not more than four years. The bursars are to be selected in the first instance from the families or relatives of those who are or have been servants, retainers, tenants, or cottars upon the estates of Balmoral, Abergeldie, or Birkhall, and, failing these, from the families of persons residing in the united parishes of Crathie and Braemar. Patron—the Queen. Trustees—the Keeper of the Privy Purse and the Principal of

the University of Aberdeen. The Trustees are also empowered, on the direction of the patron, to pay to any bursar, on his quitting the University, a sum not exceeding £25, towards his outfit or advancement in life. 3. *Braco*: One bursary, of the annual value of £13 10s., or thereby, tenable for four years. Patron—the Right Honourable the Earl of Fife. 4. *Burnett*: The number of bursaries is four, of the annual value of £9 10s. each, or thereby, tenable for four years. Patron—Sir Robert Burnett, of Leys, Bart. These bursaries are meantime, at the desire of the patron, awarded by competition. 5. *Coll*: One bursary, of the annual value of £16 10s., tenable for four years. Preference to the name of Maclean. Patron—the Chancellor of the University. 6. *Cowe*: One bursary, of the annual value of £7, or thereby, tenable for four years. Patrons—the Trustees of the founder. 7. *Cruickshank*: One bursary, of the annual value of £15, or thereby, tenable for four years. Restricted to the names of Cruickshank, Top, or Tap. Patron—the minister of Monquhitter for the time. Also one bursary, of the annual value of £18 15s., or thereby, tenable for four years. Restricted as above. Patron—the minister of New Deer for the time. 8. *Denoon*: One bursary, of the annual value of £5, tenable for four years. For students of Sutherland or Rossshire. Patrons—the Presbyteries of Tain and Dornoch. 9. *G. Dingwall*: The annual value is about £15. The Presbytery of Turriff are the patrons. In the appointment preference is to be given to those of the names of Dingwall and Forsyth, and to those born in the parish of Auchterless. 10. *Drum*: The number of bursaries is eight, of the annual value of £40 each, or thereby, and tenable for four years. Patron—Alexander Forbes Irvine, Esquire, of Drum. 11. *Ettles* (*Elgin*): Open to students in the Elgin Academy, who are natives of the town and parish of Elgin, or sons of parents who have been householders therein for five years preceding the competition, and who have been students in said academy for three years. The annual value of the bursary is £21 10s., or thereby, tenable for four years. Patrons and trustees—the sheriff-substitute of Elgin and the two ministers of the parish of Elgin for the time. 12. *Ettles* (*Inverness*): To be awarded after competition among boys in the Inverness Academy who are natives of the town and parish of Inverness, or sons of householders therein for at least five years preceding the date of competition, and who shall have been in regular attendance at the academy for three years preceding the date of the competition. The annual value of the bursary is about £20, tenable for four years. Patrons and Trustees—the sheriff-substitute of Inverness and the three ministers of the parish of Inverness for the time. 13. *Findlay*: The number of bur-

saries is three, of the annual value of £10 each, tenable for four years in the Faculty of Arts, and for two years more in that of Theology or Medicine. Preference first to the names of Moir, Garioch, and Garden, if related to the patron or founder; then to sons of clergymen, members of the Aberdeen synod; and lastly, to sons of residenters in the parish of Clatt, of the names of Booth, Barclay, Hay, and Wilson. Patrons—the Trustees of the late Col. Geo. Moir, of Scotston, C.B. 14. *Fraser*: One bursary, of the annual value of £25, for a person educated at the Royal Academy of Inverness, tenable for four years, on passing the required examinations, and thereafter, provided the student obtain the degree of M.A., for other four years as a student of Theology, and then increased to £30. Patrons—the Provost and four baillies of Inverness, the three ministers of Inverness, and three delegates from the presbytery of Inverness. 15. *Glenfarquhar (Kintore)*: One bursary, of the annual value of £16 16s., tenable for four years. Preference to (1) boys of the name of Falconer; (2) boys born or educated at the School of Corveth; (3) boys born or educated at the School of Fordoun; and (4) any other boys presented by the patron. Patron—the Right Honourable the Earl of Kintore. 16. *Glenfarquhar (Ramsay)*: One bursary, of the annual value of £16 16s., tenable for four years. Preference as in preceding. Patron—Sir Alexander E. Ramsay, of Balmain, Bart. 17. *Grant*: One bursary, of the annual value of £11 10s., or thereby, tenable for four years. Preference to the name of Grant, or descendants of Captain Thomas Fraser, of Newton. Patron—the heirs of Sir James Grant, of Grant; the Earl of Seafield. 18. *Greig*: One, value £6, tenable for four years. Preference to the names of Greig, Thomson, or Erskine. Patron—Andrew Robertson, Esq., late of Foveran. 19. *Lawrie*: Two, of the annual value of £8 each, or thereby, tenable for four years. Preference to the name of Booth. Patrons—the Trustees of the founder. 20. *Leys*: One, of the annual value of £15, tenable for four years. Patron—Sir Robert Burnett, of Leys, Bart. 21. *Dr. John Lorimer*: One bursary of the annual value of £14, tenable for four years. Preference to the relations of the parents of the founder, failing whom any student may be appointed. Patrons—the Moderator and Kirk-Session of Mortlach. 22. *Dr. William Lorimer*: Two bursaries of the annual value of £16. Each bursar, after attending for one year at the High School of Aberdeen, is entitled to hold his bursary at the University for four years as a student in Arts, provided he pass the Entrance examination required of presentation bursars, and the examinations for the degree of M.A. Preference to the relations of the father and mother of the founder alternately, failing whom any student

may be appointed. Patrons — the Moderator and Kirk-Session of Cullen. 23. *Mackintosh*: One bursary of the annual value of £5 or thereby, tenable for four years. Preference to persons of the name of Mackintosh, or of the Clan Chattan. Patron—the Mackintosh of Mackintosh. 24. *Macleod*: One bursary of the annual value of £10 or thereby, tenable for four years. The bursar must be of the name of Macleod, but preference is to be given to the descendants of Æneas Roy Macleod, formerly of Ardmore in Coigach. When there is more than one candidate, the bursary is to be given, after competition, to the most deserving. Patrons—the Senatus of the University. 25. *Moir, Robert*: One bursary of the annual value of £13 or thereby, tenable for four years. To be given to (1) sons of clergymen in the Presbytery of Strathbogie, whom failing (2) sons of parents residing in the parish of Rothiemay, who are members of the parish church, whom also failing (3) any young man whom the said presbytery may consider deserving, whose parents are members of the Church of Scotland. Patrons—the Presbytery of Strathbogie. 26. *Paterson*: One bursary of the annual value of £14, tenable for four years. To be given from time to time to one of two scholars at the Grammar School in Aberdeen upon the founder's mortification. Preference—1st, to founder's relations; 2nd, to the name of Paterson; and 3rd, to sons of hammermen, burgesses of Aberdeen. Patron—the Principal of the University. 27. *Ramsay*: The number of bursaries is four, of the annual value of £24 each or thereby, and tenable for four years. Patron—Sir Alexander E. Ramsay of Balmain, Bart. 28. *Redhyth*: The number of bursaries is sixteen, of the annual value of £22 10s each, and tenable for four years. There are twenty-four bursaries at the School of Fordyce on this foundation, of the annual value of £12 each, payable partly in meal, and tenable for five years. Patron—the Right Honourable the Earl of Seafield. 29. *Runey*: Two of the annual value of £9 each, or thereby. To students in any of the Faculties during the lives of the Trustees of the Founder; thereafter to students in the Faculty of Arts, "according to merit at the annual University Competition for Bursaries." Patrons — John P. Cumine, Advocate, Aberdeen, and others, Trustees of the Founder. 30. *Scott (Bishop's)*: One bursary of the annual value of £22 or thereby, tenable for four years. To be given to the son of any poor clergyman of the Scotch Episcopal communion, or should there be no claimant of said description, to any other young man in needy circumstances, who is intended for the Ministry of the Scotch Episcopal Church. Patron—the Bishop of the Episcopal Church in Aberdeen for the time being. 31. *Scott (Presbytery*

of Strathbogie): One bursary of the annual value of £16 or thereby, tenable for four years. To be given to the son of any poor clergyman of the Established Church of Scotland, in the presbytery of Strathbogie, or, should there be no claimant of said description, to any young man in indigent circumstances whose father resides in the town of Huntly, and failing such, to any young man residing within the bounds of the presbytery of Strathbogie, who is meant for the ministry of the said Church. Patron—the Presbytery of Strathbogie. 32. *Smith*: For a student from the county of Forfar, whom failing, of Aberdeen. The bursary is of the annual value of £15 or thereby. Patrons—Robert Smith, advocate in Aberdeen, and others, the trustees of the founder. 33. *Stuart* (*Fordyce*): The interest of £600 for the education of a young man of the name of Stuart, whom failing Simpson, for five years at Banff Academy, and four years at the University; also the interest of a like sum of £600 for the education of a young man of said names for five years at Fordyce Academy and four years at the University. Patrons—the Presbytery of Fordyce. 34, *Sturm*: The number of scholarships is two, of the annual value of £33 each or thereby, tenable for five years. The candidates must be not less than fifteen years of age, natives of the parish of Mortlach, Banffshire, and must have been educated at the Parish School of Mortlach during at least two years. Patrons — the Minister and Deacons of the Established Church of said parish. 35. *Turner*: One bursary of the annual value of £11 2s., tenable for four years. Patron — Major Turner of Turnerhall. Also one bursary of the annual value of £11 2s., tenable for four years, to be given by comparative trial. Patrons — the Magistrates and Town Council of Aberdeen. 36. *Udny Duff*: One bursary of the annual value of £14, tenable for four years. Preference to young men of the name of the founder, or related to, or connections of the founder's family, failing whom any student may be appointed. Patron — the Right Honourable the Earl of Fife.

(c.) *Conditions of Bursaries under the Patronage of the Incorporated Trades of Aberdeen.*—1. *Guild*: For three poor boys that are craftsmen's sons. The Convener and Trades prefer, in the first place, tradesmen's sons within the town of Aberdeen if qualified; and failing these, the sons of tradesmen within Scotland are considered eligible. The bursaries are of the annual value of from £15 to £30, and tenable for four years. 2. *Moir*: Founded for a Philosophy bursar for four years. For a tradesman's son within the burgh of Aberdeen, but with preference to the name of Moir.

II.—BURSARIES IN THE FACULTY OF DIVINITY.

(A.) *Competition Bursaries.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable.	Annual Value.	Aggregate Annual Value.
						£ s. d.
4	1677	Johnston	1	3	—	15 0 0
8	1633 1635	Watt	4	3	£14	56 0 0
7	1669	Rolland	1	3	—	15 0 0
5	1694 1793	Lorimer	1	4	—	15 0 0
3	1730	Fraser	1	3	—	30 0 0
1	1795	Bruce	5	3	4 of £15 1 of £10	70 0 0
2	1876	Corbet	4	—	£8	32 0 0
6	1876	Mackay	1	3	—	35 0 0
			18			£268 0 0

(B.) *Presentation Bursaries.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable.	Annual Value.	Aggregate Annual Value.	Patrons.
					£ s. d	£ s. d.	
2	1656	Drum	4	4	75 0 0	300 0 0	Al. Forbes Irvine, Esq., of Drum.
7	1699	King William	2	—	10 0 0	20 0 0	The Lords of H. M. Treasury.
1	1711	Burnett	2	4	11 10 0	23 0 0	Sir Robert Burnett, Bart.
5	1727	Ramsay	4	3	20 0 0	80 0 0	Sir Al. E. Ramsay, Bart.
4	1730	Fraser	1	4	—	30 0 0	The Provost, 4 Bailies, 3 Ministers, and 3 Delegates from the Presbytery of Inverness.
3	1804	Findlay	3	—	10 0 0	30 0 0	The Trustees of the late Colonel George Moir, of Scotston, C.B.
6	1885	Scott	1	—	—	16 10 0	The Presbytery of Strathbogie.
			17			£499 10 0	

(A) *Conditions of Bursaries open to Competition.*—1. *Bruce*: The number of bursaries is five—four of the annual value of £15 each and one of £10. Tenable for three years. The bursars are elected by the Senatus upon a comparative trial of their qualifications. 2. *Rev. Dr. Corbet's Bursaries*: The proceeds of £1000. The yearly interest of this sum to form four bursaries, of equal amounts, and be given after competitive trial—to be assigned by the Professors of Divinity, Church

History, and Biblical Criticism, to students of Divinity attending the regular course of study of Divinity and Theology in said University, with the view of their becoming ministers of the Church of Scotland. In case of equality at any competition between any of the students competing, the student shall be preferred who, in the opinion of the said professors, is most in want of pecuniary help in the prosecution of said studies. The bursaries to be tenable during the whole regular curriculum of the bursar's attendance of said classes in the University. 3. *Fraser*: One bursary of the annual value of £30, tenable for four years. To be given to the bursar in Arts on this foundation, provided he obtain the degree of M.A., and subject to the condition of his giving regular attendance as a student in Theology during his tenure of the bursary. In the event of there not being a student thus qualified, or, in the event of a vacancy occurring during the period of four years, for which the bursary is tenable, an appointment is to be made by the Senatus, for four years, or for the unexpired portion of the four years, of a graduate in Arts, subject only to a preference in favour of students educated at the Royal Academy of Inverness. There is a second bursary on this foundation, of the annual value of £30, tenable for three years, open for competition to all Masters of Arts of any of the universities of Scotland entering on their first or second session in the Faculty of Divinity. 4. *Johnston*: One bursary, of the annual value of £15, tenable for three years. 5. *Lorimer*: One of the annual value of £15, tenable for three years. 6. *Mackay*: See this foundation under the head of "Competition Bursaries," in *Faculty of Arts*. 7. *Rolland*: One bursary, annual value £15, tenable for three years. 8. *Watt*: The number of bursaries is four, of the annual value of £14 each. Open for competition to all Masters of Arts of any of the universities of Scotland entering on their first or second session of Divinity in the University of Aberdeen. Tenable for three years, provided regular attendance be given as a student in Theology.

(B) *Conditions of Bursaries under Private Patronage.*—1. *Burnett*: The number of bursaries is two, of the value of £11 10s. each, or thereby, tenable for four years. Patron—Sir Robert Burnett of Leys, Bart. 2. *Drum*: The number of bursaries is four, of the annual value of £75 each, or thereby, and tenable for four years. Patron—Alexander F. Irvine, Esq., of Drum. 3. *Findlay*: See this foundation under the head of *Presentation Bursaries in the Faculty of Arts*. 4. *Fraser*: See this foundation under the head of *Competition Bursaries in this Faculty*. 5. *Gilbert Ramsay*: The number of bursaries is four, of the annual value of £20, or thereby, tenable for three years. Patron—Sir

Alexander E. Ramsay of Balmain, Bart. 6. *Scott*: See this foundation under the head of *Presentation Bursaries in the Faculty of Arts*. 7. *King William's Mortification*: The number of bursaries is two, of the annual value of £10 each. On a vacancy, a list of three candidates, who must be Masters of Arts, is transmitted to the Lords of her Majesty's Treasury, who thereupon appoint one to the vacant bursary.

III.—BURSARIES IN THE FACULTY OF MEDICINE.

(A.) *Competition Bursaries.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable	Annual Value.	Aggregate Annual Value.
					£	£ s.
2	1612 } 1613 }	Liddel	4	4	20	80 0
3	1807	Mather	4	4	20	80 0
1	1882	Greig	1	3	—	11 10
4	1882	Milne	1	3	—	35 0
			10			£206 10

(B.) *Presentation Bursaries.*

No. of Foundation.	Year of Foundation.	Name of Bursary.	No. of Bursaries.	Years Tenable	Annual Value.	Aggregate Annual Value.	Patrons.
					£	£ s.	
1	1804	Findlay	3	2 after Arts	10	30 0	The Trustees of the late Col. Moir, of Scotsoun, C.B.
5	1808	Milne	1	1	—	28 0	The Senatus.
3	1872	Hay	1		—	5 0	Ditto.
2	1874	The Glasgow Aberdeenshire Association	1	3	—	15 15	The Glasgow Aberdeenshire Association.
4	1876	Mackay	1	4 after Arts	—	35 0	The Senatus.
			7			£113 15	

(A.) *Conditions of Bursaries in Faculty of Medicine.—Open to Competition.*—1. *The Dr. Greig (Fyvie) Bursary:* One bursary of the annual value of £11 10s., or thereby, tenable for three years, for students commencing the second winter session of their Medical studies, preference being given in cases of equality to natives of the parishes of Fyvie, Auchterless, Methlick, Tarves, and Old Meldrum. 2. *Liddel:* The number is four, of the annual value of £20 each, tenable for four years. 3. *Mather:* The number is four, of the annual value of £20 each, tenable for four years. 4. *Milne (William):* One bursary of the annual value of £35 or thereby, tenable for three years, for students about to commence the second winter session of their Medical studies.

(B.) *Under Private Patronage.*—1. *Findlay*: See under *Presentation*

Bursaries in the Faculty of Arts. 2. *Glasgow Aberdeenshire Association:* One bursary of £15 15s., or thereby, and tenable for three years. Open to deserving students, to be selected by the Medical Faculty, who are beginning their Medical study, or who have attended during one year in Medicine. 3. *Dr. John Hay's Foundation:* Under rules and regulations of the Principal and Professors, the bursar to preserve the tombstone in Midmar Churchyard of the late Mrs. Eliza Greentree, or Cruickshank. 4. *Mackay:* See under the head of *Competition Bursaries in the Faculty of Arts.* 5. *Milne:* For defraying annually the expense of the apprentice fee and infirmary dues of a student in Medicine, to be selected from the students in the Magistrand Class; the Professor of Medicine to be the nominator of the medical instructor of the bursar. The value is £28, or thereby, tenable for one year.

IV.—BURSARIES IN FACULTY OF LAW.

Year of Foundation	Name of Bursary.	No. of Bursaries.	Years tenable after Arts.	Annual Value.	Aggregate Annual Value.	Patrons.
	(A) *Competition Bursary:*			£ s. d.	£ s. d.	
1807	Mather	2	2	10 0 0	20 0 0	—
	(B) *Presentation Bursary:*					
1876	Mackay	1	2	—	35 0 0	The Senatus.

(A) *Conditions of Bursaries in Faculty of Law.—Competition Bursaries.—Mather:* The number of bursaries is two, of the annual value of £10 each, tenable for two years. (B) *Presentation Bursary.—Mackay:* See this foundation under the head of *Competition Bursaries in the Faculty of Arts.*

V.—SCHOLARSHIPS.

No. of Foundation.	Year of Foundation.	Name of Scholarship.	No. of Scholarship.	Years of Tenure.	Annual Value.	Aggregate Annual Value.	Faculty.
					£ s. d.	£ s. d.	
3	1793	Murray	1	3	—	*70 0 0	Arts.
2	1860	Fullerton, Moir, and Gray	4	2	100 0 0	625 0 0	Arts.
			3	3	75 0 0		
1	1867	Brown	2	2	17 10 0	35 0 0	Divinity.
4	1874	John Murray (and Medal)	1	1	—	*20 0 0 and Medal	Medicine.
			11			£750 0 0	

* About the annual value.

Conditions of Scholarships. — 1. *Brown Divinity Scholarships*: (1). Two scholarships are to be established, and to be called the *Brown Scholarships*, in memory of Ebenezer Brown, Esq., nephew of the foundress. (2.) These scholarships are to be held by students of Divinity of this University, after they have finished their course of study, and then for two years. (3.) The scholarships are to be open for competition to all students who have passed through a complete course of Theological training in this University, provided they do not hold a scholarship in this or any other university. (4.) The *examination* for these scholarships is to be held only at the end of a session, and then by means of the papers for the B.D. degree. (5.) Competitors must present themselves for competition at the end of the first session, after they have completed their Divinity course; and a Gaelic-speaking student, *cæteris paribus*, is to be preferred. (6.) The value of each scholarship is to be about £17 10s., or as nearly as possible half the annual proceeds of the fund. (7.) The above regulations may be changed by the Divinity Faculty, if experience shows it to be desirable to make any change. 2. *Fullerton, Moir, and Gray*: The number of scholarships is seven—two of the annual value of £100 each, to be awarded for distinction in Classical Literature, including Greek and Latin, tenable for two years; two of the annual value of £100 each, to be awarded for distinction in Mental Philosophy, including Logic, Metaphysics, and Moral Philosophy, tenable for two years; and three of the annual value of £75 each, to be awarded for distinction in Mathematics, including Pure Mathematics and Natural Philosophy, tenable for three years. They are open for competition to all graduates in Arts of less than two years standing. One scholarship in each of the three departments is awarded in each year. 3. *Murray*: Annual value, about £70. To be awarded to an "ingenious youth," being a graduate in Arts of the University of Aberdeen, for his education as a lawyer, physician, civil engineer, architect, or such other liberal secular profession; tenable for three years. All Masters of Arts are eligible who have obtained the degree within three years prior to the vacancy in the scholarship. The Senatus of the University to examine and inquire as they think fit regarding the candidates—a preference being given, *cæteris paribus*, to those of the surname of Murray. 4. *The John Murray Medal and Scholarship*: The annual income of the capital (about £600) to be applied to the purchase of a gold medal, and the payment of the balance to a graduate of the Medical School of the University, and every third year to a student in the Medical School connected with the Middlesex Hospital.

VI.—PRIZES AND MEDALS.

No. of Foundation.	Year of Foundation.	Names of Prizes.	No. of Prizes.	Years Tenable.	Aggregate Annual Value.	Faculty.
					£ s.	
3	1793	Blackwell	1	1	25 0	General.
4	1801	Hutton	1	1	30 0	Arts.
9	1831 / 1860	Simpson (Mathematical)	1	1	*65 0	Arts.
10	1838 / 1860	Simpson (Greek)	1	1	*65 0	Arts.
9	1846 / 1860	Boxhill	1	1	28 0	Arts.
12	—	Town Council Gold Medal	1	1	—	Arts.
1	1869	Arnott Prize	1	1	35 0	Arts.
2	1876	Do. Gift	1	—	—	Arts.
6	—	Natural Science Honours Prize	1	1	10 0	Arts.
7	1873	Seafield Medal (Latin)	1	1	—	Arts.
7	1873	Seafield Medal (English)	1	1	—	Arts.
8	1879	Shepherd Memorial Gold Medal	1	1	—	Medicine.
5	1880	Jenkyn's Prize (Classical Philology)	1	1	8 0	Arts.
11	1880	Stuart (Hebrew)	2	1	8 0	Divinity.
			15			

UNIVERSITY PRIZES.—1. *Arnott*: The interest of £1000, which is applied annually for prizes for the students of the Magistrand Class, who having passed all the examinations for their degree, have distinguished themselves most in the Experimental branches of Natural Philosophy. At present the whole interest is given in a single prize. 2. *The Neil Arnott Foundation for Experimental Physics*: The interest of £1000 to be applied to the purchase of apparatus for the Physical Laboratory and to the remuneration of any assistant employed, under the Professor of Natural Philosophy, in giving practical instruction to students; or in any other way that shall seem to the Senatus of the time being best calculated to promote the practical study of Physics in connection with the ordinary teaching. 3. *Blackwell*: A prize of £25 for the best English Essay on a prescribed subject, to be awarded every alternate year. 4. *Hutton*: The value of this prize is £30. It is awarded annually to the student of the Magistrand Class who is most distinguished in the examinations for Honours in Classics and Philosophy. 5. *The Jenkyns' Prize in Classical Philology*: The prize is of the value of £8 or thereby. Open for competition to students in attendance during the last two years of their Arts course, and the regulation of subjects and the decision of the prize to rest with the Professors of Greek and Latin for the time being. 6. *Natural Science Honours Prize*: A prize of £10 has been annually given to the Magistrand who has

* About aggregate annual value.

acquitted himself the most creditably at the examinations for Honours in the Department of Natural Science. 7. *Seafield Gold Medals*: Two gold medals: one for the best Latin scholar, and one for the best English scholar in the Magistrand Class in the University; and one silver medal to be awarded by the Redhyth Trustees to the best scholar at the Parish School of Fordyce. 8. *The Shepherd Memorial Gold Medal*: Open for competition to students who have completed the third year of their Medical course, and to be awarded to the student who shall have obtained the highest number of marks at a special examination on the subject of "The Principles and Practice of Surgery." 9. *Simpson and Boxill* (*Mathematics*): The prize founded by Dr. Simpson is of the value of £65 or thereby, and the annual income of Dr. Boxill's foundation about £28, which sums are to be annually awarded as a first and second prize respectively to the two graduates for the year who shall have been the most distinguished in the examination for Honours in the Department of Mathematics. 10. *Simpson* (*Greek*): For distinction in Greek. To be annually competed for by the scholars in the Fourth or Magistrand Class. The value of the prize is £65 or thereby. 11. *Stuart* (*Hebrew*): Two prizes of the value of £8 or thereby each, to the two best students in the Second Hebrew Class. 12. *Town's Gold Medal*: A gold medal has been annually given by the Magistrates and Town Council of Aberdeen to the most distinguished scholar at the termination of the Arts curriculum.

7. BURSARIES AND SCHOLARSHIPS NOT EXCLUSIVE TO THE UNIVERSITY OF ABERDEEN.—*Bursaries*: *Dow*: The number is two, of the annual value of about £10 each, and tenable for four years, "at any of the Scottish Universities, St. Andrews in preference." Restricted first to scholars natives of the parish, and educated at the Parochial School of Kirkmichael (Perthshire); whom failing to scholars natives of the parish, and educated at the Parochial School of Moulin. Patrons—Patrick Small Keir, Esq., of Kindrogan; James Small, Esq., of Dirnanean; and William A. Keir, Esq., younger, of Kindrogan. *Sharp*: It is of the annual value of £18, tenable for four years. The bursar must be a student of Divinity of the Church of Scotland, and may prosecute his studies at any one of the Scottish Universities. Preference first to applicants of the name of Sharp; next to the name of Sim; failing whom any student being a native of or subject to the jurisdiction of the Presbytery of Perth may be appointed. Patrons—the Presbytery of Perth. *Duncan* (*Presbytery of Arbroath*): For assisting in the education of young men studying with a view to the ministry of the Free Church of Scotland. Annual income about £250. The bursaries

vary in value from £20 as a *minimum* to £30 as a *maximum*, and are meantime confined to University and Theological students, those born or brought up and educated within the bounds of the Presbytery having a preferential claim. They are determined by a competition held annually, in the month of September, and conducted chiefly by written papers. The subjects of examination are announced annually in the month of April, and embrace all the usual branches of the curriculum in Arts or Theology; on all cases 60 per cent. of the combined value of all the examination papers is fixed as the *minimum* amount required for acquiring or retaining a bursary. The bursaries are tenable through the whole ordinary curriculum in University or Hall, provided those holding them satisfy the Presbytery annually, by certificate and examinations, of their continued good character, diligence, and progress; but the amount held by any bursar may be varied within the limits of the *maximum* and *minimum* values according to the appearance made by him in these yearly examinations.

Scholarships. — *The Ferguson*: These are six in number, of the annual value of £80 each, and tenable for two years. The examinations are held annually in Glasgow, and conducted by examiners chosen by the Trustees from among the Professors of the Universities and Colleges of Scotland, or other persons of literary eminence, no examiner being appointed for more than two years consecutively. *Gunning*: Three in number, of the annual value of £50, £30, and £20 respectively; open to students of the Church of Scotland and Free Church of Scotland; tenable for three years. The examination is on Natural History, Botany, and Geology, and some department of Natural Theology or Christian Apologetics.] [They are open to students beginning their Theological course, after a course of not less than three years in the Faculty of Arts in a Scottish University.

Shaw Philosophical Fellowship.—The fellowship was founded in 1867, and is of the annual value of about £171, tenable for five years. It is open to graduates in Arts of any of the four Scottish Universities (or students who have passed all examinations for the degree in Arts) of not more than five years' standing at the time of competition. It cannot be held along with any other fellowship, scholarship, or bursary in any Scottish university, nor by any person who already holds a fellowship in any English or Irish University, though the holder of the Shaw fellowship will not be precluded from afterwards obtaining an English or Irish fellowship. The subjects of examinations are—Logic, Metaphysics, including Psychology, Moral Philosophy, and the History of Philosophy. It is in the patronage of the University of Edinburgh.

University of Aberdeen Local Examinations.

The regulations concerning Local Examinations in connection with this University are:

The examinations will be held in Aberdeen, and at any other suitable place where six or more candidates are prepared to come forward. Arrangements will be made for the establishment of such a local centre on application to the Secretary.

Candidates will receive, on application to the local Secretary, a printed schedule, to be returned before June 1st, stating (1) the place of their education for the last two years; and (2) the subjects chosen by them for their examination.

There will be three separate examinations: (1) A *Preliminary examination*, which must first be passed by all candidates, but may be taken in the same year with the examination for either of the certificates; (2) an *Ordinary Certificate examination* on subjects to be selected by the candidate; (3) an *Honours Certificate examination* on subjects to be selected by the candidate.

Candidates will be required to pay the following *fees*: For the Preliminary examination, 7s. 6d.; for the Ordinary Certificate examination, 12s. 6d.; for the Honours Certificate examination, £1.

Those who have passed the Preliminary examination of any of the other Scottish universities will be exempted from passing the Preliminary examination of this University.

The holder of an Honours Certificate in Latin, Greek, and Mathematics will be held by the University as qualified, without further examination, to enter the senior classes in these subjects without attending the junior.

The General Medical Council have agreed to accept an Honours certificate obtained in these examinations in any subject as a pass in that subject for the Medical Preliminary examination in any university or medical school in the United Kingdom.

For further information see the Board's "Report" for 1880, published by Messrs. Wyllie and Sons. Price 6d.; by post 7d.

CHAPTER V.

SCOTTISH INSTITUTIONS GRANTING CERTIFICATES.

Glasgow Agricultural College—Highland and Agricultural Society of Scotland—Royal Scottish Society of Arts—Glasgow Choral Union.

GLASGOW AGRICULTURAL COLLEGE.

THE Glasgow Agricultural College has been founded to afford a thorough training in the Principles and Practice of Agriculture. The Glasgow Agricultural College is affiliated to the Glasgow Veterinary College. In the class-rooms and laboratories of the latter institution the lectures and demonstrations are given by special teachers in Practical Agriculture and other subjects, aided to the extent necessary by the teachers of the Veterinary College. The lectures at the College are arranged so as to embrace all the important subjects bearing on Agriculture. Systematic courses of lectures are given on Practical Agriculture, General and Agricultural Chemistry, Veterinary Medicine and Surgery, Botany, Natural History, Farm Accounts, and Surveying. The full course of instruction will qualify students for the diploma of the Highland and Agricultural Society and the Certificates of the Royal Agricultural Society of England, but, while the whole course is recommended for all those who are qualifying themselves for a diploma, a shorter course, embracing the Syllabus of the Science and Art Department, is given; or a student may select any single class which he may desire.

Course of Instruction.

Science and Practice of Agriculture.—The members of this class receive a complete course of instruction in Practical Agriculture, including the most approved methods of cultivating different classes of soils, and the crops adapted for each; the influence of soil and climate on husbandry; the selection and rotation of crops, and the

cultivation of all the different crops usually grown in this country; the Breeding, Feeding, and General Management of all kinds of Farm Stock, Dairy Farming, Drainage, and General Estate Management.

Farm Work.—Students have an opportunity of taking part in all kinds of work in progress at the Farm under the superintendence of the Professor of Agriculture and the Farm Overseer.

Chemistry.—The course of instruction in Chemistry consists of: 1. Lectures on General Chemistry. 2. A Special Course of lectures on Agricultural Chemistry. 3. Laboratory Instruction—including the Analysis of Manures, Feeding Stuffs, Water, Soils, and other substances of Agricultural importance.

Veterinary Medicine and Surgery.—For this subject the students are allowed to attend the lectures delivered to the Veterinary students, and will, therefore, have an opportunity of acquiring a knowledge of the nature of the diseases to which farm stock is liable, and the most approved methods of treatment.

Botany.—In this class students have brought under their notice the structure and functions of the different organs of Plants; Germination; Modifications effected in Plants by selection and cultivation; Hybrids; Farm Plants; including the diseases to which they are most liable.

Natural History.—The lectures embrace the General Principles of Classification; special history of Parasites, and other forms noxious to man and those animals on which his food depends; influences which affect Domesticated Animals, beneficially or injuriously; the theory of Selective Breeding. If a practical class is arranged, those animals are examined which illustrate the general characters of each group.

Fees.—Science and Practice of Agriculture, £4 4s.; Practical Work on Farm, Surveying, and Farm Accounts, £2 2s.; General and Agricultural Chemistry, £2 2s.; Natural History, £2 2s.; Veterinary Medicine and Surgery, £3 3s.; Botany, £1 1s.

Highland and Agricultural Society of Scotland.

Certificates and Diploma in Agriculture.—The Society conducts examinations, which are both written and oral. There are three examinations, styled respectively the "Second-class Certificate examinations," the "First-class Certificate examinations," and the "Diploma examination." To pass the *Second-class certificate examination*, a candidate must be acquainted with the science and practice of Agriculture, Elementary Chemistry, Field Engineering, and Book-keeping. To pass the *First-class certificate examination*, a candidate must be acquainted with the science and practice of Agriculture,

Botany, Chemistry, Natural History, Field Engineering, and Book-keeping. To pass the *Diploma examination*, a candidate must possess a thorough knowledge of the science and practice of Agriculture, Botany, Chemistry, Natural History, Field Engineering, and Book-keeping. The Society grants annually ten *bursaries* of £20 each and five of £10 each, to be competed for amongst the pupils of schools approved by the directors.

The Society grants first and second class *certificates* in Forestry. Candidates must possess: a thorough acquaintance with the details of Practical Forestry; a general knowledge of the following branches of study, so far as these apply to Forestry—the outlines of Botany, the Nature and Properties of Soils, Drainage and Effects of Climate, Land and Timber Measuring and Surveying, Mechanics and Construction, as applied to fencing, draining, bridging, and road making; Implements of Forestry; Book-keeping and Accounts. The examinations are open to candidates of any age.

Royal Scottish Society of Arts.

The Society consists of ordinary and honorary Fellows and of Associates. It is necessary that the recommendation for ordinary fellowship or associateship be subscribed by one Fellow. The admission fee for ordinary Fellows is £1 1s., and a like sum is exacted as an annual subscription. Associates must be under twenty-five years of age, their admission fee and annual subscription are each 10s. 6d. *Prizes* are awarded by the Society. The work of the Society is chiefly in relation to the useful arts and such branches of science as bear upon the useful arts.

Glasgow Choral Union.

Applicants for admission as members must possess competent musical knowledge and ability. The musical qualifications of applicants are tested by examiners appointed by the Council. The admission fee is 5s., and the annual subscription 5s. After the seventh payment there is no further subscription. Ladies or gentlemen remaining members for seven consecutive years are entitled to *certificates* to that effect.

CHAPTER VI.

PRINCIPAL LEARNED AND ARTISTIC SOCIETIES.

Scientific—Artistic—Antiquarian—Literary—Statistical.

SCIENTIFIC.

THE ROYAL SOCIETY OF LONDON.

THE object of this Society is the "improvement of natural knowledge," and of all institutions of its kind it holds the highest position. With the exception of the Lyncean Academy at Rome, celebrated as having numbered Galileo amongst its members, the Royal Society is the oldest learned society in Europe. This institution commenced its existence about the year 1645. It at first confined itself to meeting at a certain Dr. Goddard's lodgings, in Wood-street; at the Bull Head Tavern, Cheapside; and at Gresham College. About 1648, some of the members removed to Oxford, and there continued to meet in the house of an apothecary. The members remaining in London carried on the Society until, in 1658, they were obliged to quit Gresham College, this building being required for barracks. On April 22nd, 1663, the Society was incorporated by Royal Charter, and presented with a mace by the King. In 1664, Charles II. declared himself, by his signature in the Charter-book, to be the founder of the Society, and the Duke of York, afterwards James II., was elected a Fellow.

The Charter-book is bound in crimson velvet, with gold clasps and corners and inscription plates: 1. The Shield of the Society; 2. Crest—an eagle *or*, holding a shield with the arms of England. The leaves are fine vellum, and bear, superbly emblazoned, the arms of England and of the Society; next, the third Charter and Statutes, Autographs (first page); ornamented scroll border and Royal Shield above the signatures, "Charles R., Founder" (written January 9th, 1664—5); "James, Fellow;" and "George Rupert, Fellow." In the next page are the autographs of various foreign ambassadors; and the third and succeeding pages contain the signatures of the Fellows beneath the

obligation which heads each leaf; Clarendon, Boyle, Wallis, Wren, Hooke, Evelyn, Pepys, Norfolk, Flamsteed, and Newton are here (the name beneath that of Newton is nearly obliterated by the sad habit of touching). Seventy-one pages are occupied by the Autographs of the Fellows (including those on the foreign list.) Here are the autographs of the successive Kings and Queens of England and many sovereigns of foreign countries who have visited England. Queen Victoria has signed her name as patron of the Society; and on the same richly illuminated page are the signatures of Prince Albert and the Kings of Prussia and Saxony.—*Weld's History of the Royal Society.*

A candidate for election to fellowship must be nominated by six or more Fellows, three of whom must recommend upon personal knowledge. The names of such candidates are announced at the first meeting in March; and a number, not exceeding fifteen, is selected by the Council. These are submitted to an ordinary meeting of the Society in the following May, and a day of election appointed. Those approved are then admitted. Those who have not been elected may, however, continue their names on the list of candidates for future election. No admission fee is required; the annual subscription is £3; life composition, £60.

Society of Arts.

Candidates for fellowship must be proposed by three Members, to one of whom the candidate must be personally known. Annual subscription, £2 2s.; composition fee, £21.

Royal Botanic Society of London.

The Society consists of Fellows and Members. Fellows pay an entrance fee of £5 5s., and an annual subscription of £2 2s., or a life composition of £26 5s., which includes entrance fee. Members pay £10 10s. for life; no entrance fee.

Royal Astronomical Society of London.

The Society consists of Fellows and Associates. Every candidate for fellowship must be proposed by at least three Fellows, one of whom must certify his personal knowledge of the candidate. The annual contribution for Fellows is £2 2s., and the admission fee £2 2s.

Meteorological Society.

Every candidate for fellowship must be proposed by three Fellows, one of whom must certify his personal knowledge of the candidate. The admission fee is £1, and the annual subscription £1. The composition fee is £12, exclusive of the sum paid for admission.

The Institution of Civil Engineers.

The institution consists of Members, Honorary Members, and

Associates. Every candidate for *membership* must show that he has been educated as a Civil Engineer according to the usual routine of pupilage, and has had subsequent employment for at least five years in responsible institutions as resident engineer, or otherwise in some of the branches defined by the charter as constituting the profession of a civil engineer, or has practised on his own account in the profession of a Civil Engineer for at least five years, and has acquired a considerable degree of eminence in the same.

Associates are divided into those who are and those who are not entitled to the privileges of corporate membership. Every candidate for election into the first division must be more than twenty-five years of age, have been regularly educated as a Civil Engineer, and be actually engaged in the design or construction of such works as are comprised within the profession of a Civil Engineer as defined by the charter. Candidates for election into the second division must be more than twenty-five years of age; they need not be Civil Engineers by profession, but their pursuits must constitute branches of engineering, be connected with science or the arts, or otherwise qualify them to concur with Civil Engineers in the advancement of professional knowledge.

Honorary Members are elected from persons not practising as Civil Engineers, but whose distinguished position or eminent science and experience enable them to advance the work in which the institution is interested.

Students must be not less than eighteen years of age, and must be pupils of corporate members of the institution. They are allowed the use of the library, and are eligible to compete for certain prizes.

Those Members, Associates, and Students residing within ten miles of the General Post Office are considered residents, and those beyond such limits, non-residents. Each resident Member pays £4 4s., and each non-resident Member £3 3s. per annum. Each resident Associate pays £3 3s., and each non-resident Associate £2 12s. 6d. per annum. Each resident Student pays £2 2s., and each non-resident Student £1 11s. 6d. per annum. Admission fee for each new Member and Associate, £10 10s. Composition fee for Members and Associates—(annual subscriptions only)—£52 10s.; for Members and Associates residing abroad, £26 5s.

Zoological Society of London.

Fellows pay an admission fee of £5, and an annual contribution of £3, or a composition of £30 in lieu thereof; the whole payment, including the admission fee being £35. Persons wishing to become

Fellows should communicate with the Secretary, at the office, 11, Hanover-square, W.

Anthropological Institute of Great Britain and Ireland.

This institute is established "for the promotion of the Science of Mankind (Anthropology) by the accumulation of observations bearing on man's past history and present state in all parts of the globe." Every candidate for membership must be recommended by two members of the Institute. The annual subscription is £2 2s., which is due on election, and on the 1st January in each succeeding year. A member may at any time compound his future subscriptions by the payment of £21.

Linnæan Society.

Every candidate for the fellowship must be proposed by three or more Fellows. The admission fee is £6, and the annual contribution £3. Life composition for annual subscription, £45.

London Mathematical Society.

Every candidate for membership must be proposed by three Members, one of whom must certify from his personal knowledge of the candidate. Annual subscription £1 1s.; entrance fee, £1 1s.; composition fee for the annual subscriptions, £10 10s.

Entomological Society of London.

Every candidate for membership must be proposed by three Members. The admission fee is £2 2s., and the annual contribution £1 1s. The composition for a life member is £15 15s., not including the admission fee. Foreigners, not residing in the United Kingdom, may be elected foreign members. Annual contribution, £1 1s. Foreigners and others, not resident in the United Kingdom, may be elected corresponding members; these are not subject to the payment of any fee.

Medical Society of London.

Members of the Medical profession only are eligible for election Town Fellows pay £1 1s. entrance fee, and £1 1s. annually; Fellows residing in the country, half these fees.

Chemical Society.

Every candidate for election as a *Fellow* shall be proposed by not less than five Fellows, to three of whom he must be personally known. The admission fee is £4, the annual subscription £2, and the life composition £20. Fellows residing more than twenty miles from London pay an annual subscription of £1.

Associates are elected in the same manner as Fellows, on the recommendation of the Council, but for a period of three years only, at the expiration of which time they may be re-elected. The annual subscription for Associates is £1.

Royal Society of Edinburgh.

The Society consists of Ordinary and Honorary Fellows. The entrance fee for Ordinary Fellows is £2 2s., the annual subscription is £3 3s.; after ten years membership it is reduced to £2 2s. A composition fee of £26 5s. exempts non-resident Fellows from further payment. Should such a non-resident Fellow come to reside in Scotland he is required to pay an annual subscription of £3 3s. for eight years. Candidates for admission as ordinary Fellows must be recommended by at least four ordinary Fellows, two of whom must certify their recommendation from personal knowledge.

Botanical Society of Edinburgh.

The Society consists of Honorary, Resident, Non-Resident, Foreign and Corresponding Members, of Associates and Lady Associates. The Honorary Fellows are limited to six British and twenty-five foreign—by British being understood British subjects whether resident in the British Islands or not. A candidate for admission into the Society as a resident Fellow must present an application, with a recommendation annexed, signed by at least two resident Fellows. Resident Fellows pay on admission the sum of 15s. to the funds of the Society, and 15s. as an annual subscription. Resident Fellows may at any time compound for their annual contribution by payment of £6 6s. Resident Fellows leaving Edinburgh may be enrolled as non-resident Fellows if they have paid by annual subscription the sum of £6 6s., and have also paid any arrears due at their departure. By a further payment of £2 2s. they shall be entitled to receive the Transactions.

Non-resident Fellows: Any person not residing in Edinburgh may be balloted for as a non-resident Fellow on being recommended by two Fellows of the Society and paying a contribution of £3 3s. From such no annual payment is required. Non-resident Fellows wishing to become resident must intimate their intention to the Secretary, who shall put them on the Resident list. They shall pay the annual subscription of 15s., or an additional £3 3s., or £1 1s. if they have compounded for the Transactions.

Royal Horticultural Society of Ireland

Composition fee, £10 10s.; annual subscription, £1 1s.; admission

fee, £1 1s. Candidates for membership must be proposed and seconded by members.

ROYAL GEOLOGICAL SOCIETY OF IRELAND, TRINITY COLLEGE, DUBLIN.

Admission to Fellowship requires that the candidate shall be proposed and seconded by Members. Entrance fee, £1. Annual subscription, £1; life composition, £5.

INSTITUTION OF CIVIL ENGINEERS OF IRELAND.

Candidates for membership must be more than twenty-five years of age, and have received the diploma of a recognised school of Engineering, or have served a regular pupilage to a qualified Engineer, and must share the practice of a Civil or Mechanical Engineer, or have been engaged on their own account for at least five years in such practice. Candidates for the *Associateship* must be persons who, although not qualified for the Members' class, follow occupations constituting branches of Engineering, or which enable them to concur with Civil Engineers in the advancement of professional knowledge. Candidates for the membership or associateship must be recommended by four persons belonging to the institution, two of whom must be Members. Admission fee for Members, £2 2s.; for Associates, £1 1s.; annual subscription for Members, £2 2s.; for Associates, £1 1s. Members resident twenty miles or upwards from Dublin pay £1 11s. 6d. per annum, and those resident out of Ireland £1 1s. per annum. Life composition fee for annual subscriptions (Members and Associates), £21; for residents abroad, £10 10s.

ARTISTIC.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Extract from the Charter: "That the Fellows shall be Architects who have been engaged as principals for at least seven successive years in the practice of Civil Architecture. That the Associates shall be persons engaged in the study or practice of Civil Architecture for a less term than seven years, and who have attained the age of twenty-one years, but such Associates are not to be eligible to hold any office of the said Society hereinafter mentioned excepting that of auditor, nor have any right to vote or to otherwise interfere in the regulation of the affairs of the said Society."

Every candidate for the Fellowship or Associateship must be proposed by three Fellows.

The entrance fee for each Fellow is £5 5s., and the annual subscrip-

tion £4 4s. In the case of a Fellow elected from the class of Associates the entrance fee is £2 2s. The entrance fee for each Associate is £3 3s., and the annual subscription £2 2s.

Institute of Painters in Water Colours.

The exhibitions of this Society are confined entirely to the works of Members and Lady-members. Members and Lady-members are elected by ballot, which takes place annually in March. Three paintings in water colours must be submitted by the candidate for the inspection of the Members.

Royal Irish Academy.

This institution exists for the purpose of advancing the study of Science, Polite Literature, and Antiquities. Membership is obtainable by election, on the recommendation of a Member of the Academy. Entrance fee, £5 5s. Annual subscription, £2 2s. Composition fee for annual subscription, £21. A diploma of membership is issued to a Member compounding for life.

Royal Hibernian Academy of Arts.

The Secretary writes: "There are no vacancies on the list of Members or Associates of the Royal Hibernian Academy, but candidates who have exhibited during the past two years can send in their names within the first month of the exhibition being open."

Antiquarian.

Royal Archæological Institute of Great Britain and Ireland.

This Society was established for the encouragement of intelligent researches into British antiquities, and of vigilant care for their preservation. Candidates for membership must be nominated by one Member of the Council or two ordinary Members. Entrance fee £2 2s.; annual subscription, £1 1s.; life composition, £10 10s.

Society of Antiquaries of London.

Ever candidate for fellowship must be proposed by three or more Fellows. Annual subscription, £2 2s.; this may be compounded for by a single payment of £26 5s. Admission fee, £5 5s.

British Archæological Association.

The Society was founded "to investigate, preserve, and illustrate all ancient monuments of the history, manners, customs, and arts of our forefathers, in furtherance of the principles on which the Society

of Antiquaries of London was established; and to aid the objects of that institution by rendering available resources which had not been drawn upon, and which, indeed, did not come within the scope of any antiquarian or literary society." Associates pay an entrance fee of £1 1s., and an annual subscription of £1 1s. The life subscription is £10 10s.

Society of Antiquaries of Scotland.

Candidates for admission as ordinary Fellows must be recommended by one ordinary Fellow and two Members of the Council. Corresponding Associates are elected in the same way as ordinary Fellows; they are not liable for any fee of admission, or annual contributions. The number of lady Associates is limited to twenty-five; they are not liable for any fees of admission or annual contribution. Ordinary Fellows pay £2 2s. as entrance fee, and an annual subscription of £1 1s. The entrance fee and annual subscription may be compounded for by a single payment of £21.

Literary.

Royal Asiatic Society.

The Secretary writes: "The subscription to this Society for a resident Member is £3 3s. per annum, and for any one not living in England £1 1s. For this you now get four numbers annually of our Journal, which you cannot purchase for less than 30s., so that you get back nearly half of your annual subscription as a resident. Besides this you are entitled to attend all our meetings, and to introduce to them any friends of your own, and also to take to your own residence any books which you may like to read at home."

Philological Society (*University College, Gower-street*).

A candidate for membership must be proposed by three Members. Entrance fee £1 1s., annual subscription £1 1s.

Society of Science, Letters, and Art of London.

The Society exists "for the advancement of science, literature, and art, including music and the fine arts." University graduates, fellows of other learned societies, and persons eminent or engaged in science, literature, or art, including music and the fine arts, are eligible as Fellows. Annual subscription, £2 2s.; life subscription, £10 10s. The membership is open to all persons interested in science, literature, art, or music. Annual subscription, £1 1s.; life subscription, £5 5s. Foundation Fellows pay £1 1s. yearly, or £5 5s. for life subscription.

The number is limited to 500. Life Fellows and Honorary Members are eligible for admission as Licentiates by examination. The form of recommendation to be signed by ten Members. The Latin diploma is presented to each Fellow and Member on admission. Branches of the Society are established in various centres throughout the world. The office of the Society is at Endymion House, Charleville-circus, Crystal Palace Park-road, S.E.

Statistical.

Statistical Society of London.

Every candidate for fellowship must be proposed by two or more Fellows. Annual subscription £2 2s.; life composition, £21.

Statistical and Social Enquiry Society of Ireland.

Members pay £1, and Associates 10s. per annum.

SECTION II.

BRITISH POSSESSIONS.

CHAPTER I.

UNIVERSITIES AND COLLEGES IN THE DOMINION OF CANADA.

McGill College and University, Montreal—Laval University—University of Toronto—University College, Toronto—Trinity College, Toronto—Queen's University and College, Kingston—Victoria University, Cobourg—University of New Brunswick—King's College, Windsor (Nova Scotia)—School of Practical Science, Ontario.

McGill College and University.

The statutes and regulations of the University have been framed with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned. The educational work of the University is carried on in McGill College, Montreal, and in the several affiliated colleges and schools.

I. McGill College.—*The Faculty of Arts.*—The complete course of study extends over four sessions, of eight months each; and includes Classics and Mathematics, Experimental Physics, English Literature, Logic, Mental and Moral Science, Natural Science, and one Modern Language, or Hebrew, all which subjects are imperative in the first two years of the course; but in the third and fourth years options are allowed in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science, and English Literature. Certain exemptions are also allowed to professional students. The course of study leads to the degrees of B.A., M.A., and LL.D.

The Faculty of Applied Science provides a thorough professional training, extending over three or four years, in Civil Engineering,

Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, leading to the degrees of Bachelor of Applied Science, Master of Engineering, and Master of Applied Science.

The Faculty of Medicine.—The complete course of study in Medicine extends over four sessions, of six months each, and leads to the degree of M.D., C.M. There is also a summer course, which is optional.

The Faculty of Law.—The complete course in Law extends over three sessions, of six months each, and leads to the degrees of B.C.L. and D.C.L.

II. AFFILIATED COLLEGES.—Students of affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the affiliated college, or in part in McGill College, and may come up to the University examinations on the same terms with the students of McGill College.

Morrin College, Quebec—Is affiliated in so far as regards degrees in Arts and Law.

St. Francis College, Richmond—Is affiliated in so far as regards the Intermediate examinations in Arts.

III. AFFILIATED THEOLOGICAL COLLEGES.—Affiliated Theological Colleges have the right of obtaining for their students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on. They are: The Congregational College of British North America, Montreal; the Presbyterian College of Montreal, in connection with the Canada Presbyterian Church; the Diocesan College of Montreal; the Wesleyan College of Montreal.

IV. AFFILIATED SCHOOLS.—*The McGill Normal School* provides the training requisite for teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas.

The Model Schools of the McGill Normal School are Elementary Schools, divided into a Boys' Department, Girls' Department, and Primary School.

Collegiate Institutes, Academies, and *High Schools* may be affiliated in so far as regards Matriculation in Arts and Applied Science, under regulations prescribed.

Details of all the above will be found in the Annual Calendar of the University and in announcements of the special Colleges, Faculties, and Schools, which may be had on application to the Registrar

of the University or the Principals or Secretaries of the several Colleges, &c.

Exhibitions and Scholarships in Arts.

The *Jane Redpath exhibition*, 100 dols. annually—endowed with the sum of 1667 dols. The *McDonald scholarships and exhibitions*, ten in number—annual value, 1250 dols. The *Charles Alexander scholarship*, for Classics—annual value, 120 dols. The *Scott exhibition*—endowed with the sum of 1100 dols. The exhibition is given annually in the Faculty of Applied Science. The *Barbara Scott scholarship* of Classical Languages and Literature—endowed with 2000 dols. The *David Morrice scholarship*—value 100 dols. The *George Hague exhibition*—value 125 dols.

Endowments of Medals and Prizes.

The *Henry Chapman Gold Medal*, given annually in the graduating class in Arts—endowed with the sum of 700 dols. The *Prince of Wales Gold Medal*, given in the graduating class for Honour Studies in Mental and Moral Philosophy. The *Anne Molson Gold Medal*, for an Honour course in Mathematics and Physical Science. The *Shakespeare Gold Medal*, for an Honour course to comprise and include the works of Shakespeare and the Literature of England from his time to the time of Addison, both inclusive, and such other accessory subjects as the corporation may from time to time appoint. The *Logan Gold Medal*, for an Honour course in Geology and Natural Science. The *Elisabeth Torrance Gold Medal*, for the best student in the graduating class in Law, and more especially for the highest proficiency in Roman Law. The *Holmes Gold Medal*, given to the best student in the graduating class in Medicine, who shall undergo a special examination in all the branches, whether Primary or Final. The *Sutherland Gold Medal*, for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary examinations. The *Neil Stewart prize* of 20 dols., in Hebrew.

Faculty of Arts.

COURSE OF STUDY.—Undergraduates are arranged according to their standing, as students of the first, second, third, or fourth year. They are required to attend all the courses of lectures appointed for their several years.

Ordinary Course for the Degree of B.A.—First year: Classics; French or German; English Language and Literature; Pure Mathematics; History; Elementary Chemistry. Second year: Classics; French or German; English Literature*; Logic and Elementary

* For University Examinations; Lectures Optional.

Psychology; Pure Mathematics; Botany. Third year: Classics; Rhetoric; Moral Philosophy; Mixed Mathematics; Experimental Physics; Zoology. Fourth year: Classics; English Literature; History; Mental Philosophy; Mixed Mathematics; Experimental Physics; Mineralogy and Geology. Undergraduates are required to study either French or German for two years (viz., in the first and second years), taking the same language in each year. Any student failing to pass the examination at the end of the second year will be required to pass a Supplementary examination, or to take an additional session in the language in which he has failed. In addition to the obligatory, there are other lectures, attendance on which is optional. Students who intend to join any Theological school, on giving written notice to this effect at the beginning of the first year, may take Hebrew instead of French or German. The Faculty may permit any student to take Spanish instead of French or German.

At the *examination* for the degree of B.A., Honours are given in the following subjects, for which special Honour courses are provided: 1. Classical Languages and Literature. 2. Mathematics and Physics. 3. Logic and Mental and Moral Philosophy. 4. English Language, Literature, and History. 5 Geology and other Natural Sciences. Honours are given in the above subjects in the third year also, and in Mathematics in the first and second year as well.

MATRICULATION AND ADMISSION.—Candidates for *Matriculation* as undergraduates are required to present themselves to the Dean of the Faculty, on the 15th of September, for examination; they may, however, enter after the commencement of the session, if, on examination, found qualified to join the classes. The *subjects of examination* for entrance into the first year are Classics, Mathematics and English.

Partial Students.—Candidates for Matriculation as partial students, taking three or more courses of lectures, or as students in any special course, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

Occasional Students.—Persons desirous of taking one or two courses of lectures, as occasional students, may apply to the Vice-Dean for entry in his Register, and may procure from the Secretary tickets for the lectures they desire to attend.

Every student is expected to present, on his entrance, a written intimation, from his parent or guardian, of the name of the minister of religion under whose care and instruction it is desired that he shall be placed; and the minister will thereupon be invited to communicate with the Faculty on the subject. Failing such intimation

from his parent or guardian, the Faculty will endeavour to establish befitting relations.

MEDALS, HONOURS, PRIZES, AND CLASSING.—1. *Gold Medals* will be awarded in the B.A. Honour examination to students who take the highest honours of the first rank in the subjects stated below, and who shall have passed creditably the Ordinary examinations for the Degree of B.A.: The *Henry Chapman Gold Medal*, for the Classical Languages and Literature; the *Prince of Wales Gold Medal*, for Logic and Mental and Moral Philosophy; the *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy; the *Shakespeare Gold Medal*, for the English Language, Literature, and History; the *Logan Gold Medal*, for Geology and other Natural Sciences.

2. *Honours*, of first or second rank, will be awarded to those Matriculated students who have successfully passed the examinations in any Honour course established by the Faculty, and have also passed creditably the ordinary examinations in all the subjects proper to their year. By a recent order of the Lieutenant-Governor of Ontario in Council, Honours in this University confer the same privileges in Ontario as Honours in the Universities of that Province, as regards certificates of eligibility for the duties of Public School Inspectors, and as regards exemption from the non-professional Examination of Teachers for First-Class Certificates for Grades "A. and B."

3. *Special Certificates* will be given to those candidates for B.A. who shall have been placed in the First Class at the ordinary B.A. examination, in which case exemptions cannot be taken.

4. *Certificates* of high general standing will be granted to those Matriculated students who are placed in the First Class in the aggregate of the studies proper to their year.

5. *Prizes or Certificates* to those Matriculated students who may have distinguished themselves in the studies of a particular class, and have attended all the other classes proper to their year.

6. His Excellency the Marquis of Lorne has been pleased to offer a *Gold Medal* in the Faculty of Arts, yearly during his term of office, for the encouragement of the study of Modern Languages and Literature with History.

Lorne Gold Medal.—The Regulations are as follows:

1. The subjects for competition shall be French and either German or Spanish, together with the History part of the present Honour course for the Shakespeare Medal.

2. The course of study shall extend over two years, viz., the Third and Fourth Years.

3. The successful candidate must be capable of speaking and writing both languages correctly.

4. There shall be examinations in the subjects of the course in both the third and fourth years, at which Honours may be awarded to deserving candidates.

5. The general conditions of competition, and the privileges as regards exemptions, shall be the same as for the other gold medals in the Faculty of Arts.

6. Students from other Faculties shall be allowed to compete, provided they pass the examinations of the third and fourth years in the above subjects.

7. Candidates desiring to enter on the third year of the course, who have not obtained First Class standing at the Intermediate or Sessional examinations of the second year in Arts, are required to pass an examination in the work of the first two years of the course in Modern Languages, if called on to do so by the Professors.

8. The subjects of examination shall be as follows: French, German, Spanish, History.

Exemptions from Fees under Presentation Scholarships, &c.—A number of these are in the gift of benefactors, and entitle the students holding them to exemption from the sessional fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of his Excellency the Governor-General. Candidates must pass the usual Matriculation examination. Eight *exemptions from fees* may be granted by the Board of Governors, from time to time, to the most successful students who may present themselves as candidates. By order of the Board, one of these is given annually to the *Dux* of the High School of Montreal, and one to the Dux of any other Academy or High School sending up, in one year, three or more candidates competent to pass creditably the Matriculation examination. In the event of any Academy or High School in the Province of Quebec offering for competition among pupils an *Annual Bursary* in the Faculty of Arts, of not less than 80 dols., the Governors will add the amount of the fees of tuition thereto. An *exemption from fees* may be given annually to any teacher holding the Model School or Academy diploma of the McGill Normal School, recommended by the Principal and Professors of the School, and passing creditably the Matriculation examination in Arts.

EXAMINATIONS.—*College Examinations.*—1. There are two examinations in each year—one at Christmas and the other at the end of the session. In each of these, the students who pass are arranged according to their answering, as First Class, Second Class, and Third Class. In the fourth year only the University examination for B.A. takes the place of the Sessional examination. Fourth year students

are required at the Christmas examinations to pass in all the subjects of the obligatory lectures, even though some of the subjects do not form part of their B.A. examination. 2. Students who fail in any subject in the Christmas examinations are required to pass a Supplemental examination in that subject before admission to the Sessional examinations. 3. Students who fail in one subject in the Sessional examinations are required to pass a Supplemental examination in it. Should they fail in this, they will be required in the following session to attend the lectures and pass the examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the examination alone without attending lectures, at the discretion of the Faculty. 4. Failure in two or more subjects at the Sessional examinations involves the loss of the session. The Faculty may permit the student to recover his standing by passing a Supplemental examination at the beginning of the ensuing session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects. 5. The time for the Supplemental examination will be fixed by the Faculty; and such examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of 5 dols.

University Examinations.—1. *For the Degree of B.A.*—There are three University examinations: The Matriculation, at entrance; the Intermediate, at the end of the second year; and the Final, at the end of the fourth year. In the Intermediate examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern Language, or Botany. Theological students are allowed to take Hebrew instead of a Modern Language. For the Final examination six subjects are offered for selection, namely —(1) Classics, (2) Mixed Mathematics, (3) Mental and Moral Philosophy, (4) Natural Science, (5) Experimental Physics, (6) One Modern Language and Literature (or Hebrew), with History. Every candidate must pass in four of these, namely: Classics and Mixed Mathematics, which are obligatory, and any two of the remaining subjects, at his option.

2. *For the Degree of M.A.*—Candidates are required to prepare and submit to the Faculty of Arts, not less than two months before proceeding to the degree, a Thesis on some literary or scientific subject previously approved by the Faculty. All candidates, except those who have taken First Class B.A. Honours, or have passed First Class in the Ordinary examinations for the degree of B.A., are required also to pass an examination, either in Literature or in Science, as each candidate may select.

3. *Degree of LL.D.*—Every candidate for the degree of LL.D. in course is required to prepare and submit to the Faculty of Arts, not less than three months before proceeding to the degree, twenty-five printed copies of a Thesis on some literary or scientific subject previously approved by the Faculty, and possessing such a degree of literary or scientific merit, and evidencing such originality of thought or extent of research as shall, in the opinion of the Faculty, justify it in recommending him for that degree. Every candidate for the degree of LL.D. in course is required to submit to the Faculty of Arts, with his Thesis, a list of books, treating of some one branch of literature or of science, satisfactory to the Faculty, in which he is prepared to submit to examination, and on which he shall be examined, unless otherwise ordered by vote of the Faculty.

SPECIAL PROVISIONS FOR PROFESSIONAL STUDENTS.—*Law and Medical Students.*—Students of the third and fourth years, matriculated in the Faculties of Law or Medicine of the University, are entitled to the following exemptions: In the third year they may omit the lectures and examinations in Optics and in any one of the following subjects: Zoology, Experimental Physics, or Rhetoric and English Literature. In the lectures of the fourth year they may omit Greek and Astronomy and also Geology or Experimental Physics. At the Christmas examination of the fourth year they may omit Astronomy and Optics. In the Ordinary B.A. examinations they may, in Classics, pass in Latin alone; and in Mixed Mathematics, in Mechanics and Hydrostatics alone. To be allowed these privileges in either year, they must give notice at the commencement of the session, to the Dean of the Faculty, of their intention to claim exemption as Professional students, and must produce at the end of the session certificates of attendance on a full course of Professional lectures during the year for which the exemptions are claimed.

Students in the Faculty of Applied Science.—Students in Arts who have passed the Intermediate examination and been placed therein not lower than the Second Class in Mathematics, have the privilege of entering the second year in Applied Science, and will be exempted from the Mental and Moral Philosophy and the Greek of the third and fourth years in Arts while proceeding regularly in the course for B.Ap.Sc.

Students of Affiliated Theological Colleges.—Such students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts in the same manner as other students.

LICENSED BOARDING HOUSES.—All students under twenty-one years of age, not residing with parents or guardians, nor belonging

to a Theological college, shall reside in licensed boarding houses, unless they produce written authority from parents or guardians to reside elsewhere.

FEES. — Matriculation fee for the first year (to be paid in the year of entrance only), 4 dols.; for the second year (exigible from students who enter in the second year, and also from those who have failed in the first year and re-enter in the second year on examination), 6 dols.; sessional fee, 20 dols.; library fee, 4 dols.; gymnasium fee, 2 dols. 50c. Undergraduates and students in special courses are required to pay all the above fees. Partial students, viz., those taking three or more courses of lectures, are required to pay the matriculation, library, and gymnasium fees, and 5 dols. for each class which they attend, or 20 dols. for all the courses. Occasional students taking one course of lectures only are required to pay 5 dols. per session for that course. Occasional students taking two courses of lectures are required to pay the library fee and 5 dols. for each course. The matriculation, library, and gymnasium fees are exigible from students holding exemptions from sessional fees. Graduates in Arts are allowed to attend, without payment of fees, all lectures except those noted as requiring a special fee. The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of 2 dols. Fee for the degree of B.A., 5 dols.; fee for the degree of M.A., 10 dols.; fee for the degree of LL.D., 50 dols. If the degree of M.A. be granted, with permission to the candidate, on special grounds, to be absent from Convocation, the fee is 25 dols. The B.A. fee must be paid before the examination. The M.A. fee must be sent to the Secretary of the University at the same time that the candidate sends his thesis to the Dean of the Faculty This is a condition essential to the reception of his application. A Bachelor of Arts or Master of Arts, intending to proceed to a higher degree, is required, in addition to the above, to keep his name on the books of the University, by the annual payment of a fee of 2 dols. to the Registrar of the University (which payment suffices also for Registration under chap. iii. of the Statutes of the University). He may, if he prefer it, compound for the above annual fees by the payment of 6 dols. in one sum for the Master's degree, or 30 dols. for the Doctor's degree, on or before the date of application for the degree.

COURSES OF LECTURES.—*Ordinary Course.*—1. *Classical Literature*

and History. — The lectures in this department are of the usual character, and embrace the better known authors. The range may be gathered from a given specimen. Where, in the *first year's* Greek, Homer and Xenophon were taken, one book of each was selected, together with Prose Composition; in the *second year*, of Lysias and Euripedes, one oration and one play; in the *third year*, of Demosthenes and Æschylus, the like; and in the *fourth year*, of Herodotus, one book. In *Latin, first year*, Cicero and Virgil being taken, the Epistolæ Selectæ, and one book of Virgil were selected, with Prose Composition; *second year*, book i. of Horace's Epistles, and the Germania of Tacitus, with composition continued; *third year*, of Juvenal, two satires, and of Plautus the Miles Gloriosus, with Composition; *fourth year*, of Tacitus, one book. The attention of the student is directed, in the course of the class work, to History, Antiquities, Grammar, and Geography.

2. *English Language and Literature.*—In the *first year*, the text-book is Bain's English Grammar; in the *second*, a detailed course is taken of some period of English literature; in the *third*, the text-book is Whately's Rhetoric; and, in the *fourth*, a course is taken on one or two special subjects—as, for example, a poem of Chaucer and a play of Shakespeare.

3. *History.*—The Professor delivers a given course.

4. *Logic and Mental and Moral Philosophy.—Second year*, Bain's Mental Science, and Jevons' Elementary Lessons in Logic; *third*, Calderwood's Handbook of Moral Philosophy; *fourth*, Murray's Outline of Hamilton's Philosophy.

5. *French Language and Literature.*—In the first and second years, the Grammaire des Grammaires of De Fivas is used; and in the third year, the Grammaire Elémentaire of Poitevin. The *first* year is occupied in the study of easy French authors, with dictation and colloquial exercises; the *second* with more advanced works, and translation into French; the *third* in more difficult works, with French composition and dictation; and the *fourth* in the same class of work, with such translation into French as a play of Shakespeare's. The lectures of the third and fourth years are conducted in the French language.

6. *German Language and Literature.*—In the *first* year, devoted to grammar, reading, and translations, the text-books are Schmidt's German Guide (first and part of second course) and Adler's Progressive German Reader; in the *second* and *third* years, devoted to German plays and the History of German Literature, the books are Schmidt's German Guide (second and third course), Otto's Conver-

sation Grammar, and Adler's Reader, with Translation and German Composition.

7. *Hebrew and Oriental Literature.—Elementary Course.—For Students of the First and Second Years*: Grammar—*text-book*, Gesenius' "Hebrew Grammar," with exercises in orthography and etymology; Reading; Translation and Grammatical Analysis of Historical portions of the Scriptures—Syntax—Mishlé Shualim—Fables, &c. *Advanced Course*: *For Students of the Second, Third, and Fourth Years*: Introduction to the Study of Hebrew Poetry—its spirit and characteristics. Lowth and Sarchi as text-books. Translation from the Psalms, Lamentations, and Isaiah. Ancient compared with Modern Hebrew Poetry; the productions of Halevi, Gabirol, &c., Grammar, Exercises, &c., continued. *The Chaldee Language*: Grammar, Mebo Halashon Aramith of J. Jeitteles. The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi. *The Syriac Langnage*: Grammar (Uhlemann's) and Translation. The course comprises lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology affinity of roots, &c., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

8. *Spanish Language and Literature.*—The study of the Spanish Language on this continent, being generally pursued with special reference to commercial purposes, it will be sought to impart in this course a practical knowledge of the Castilian—the richest and most harmonious of the Peninsular languages—as well as an acquaintance with its literature. Ollendorf's Spanish Grammar by Velazquez and Simmoné, and the Reader of Velazquez, are the *text-books* employed in the Junior Class, who are also exercised in Composition by both written and oral exercises. In the Senior Class Fernandes' Exercises. Besides a special comparison with the Portuguese Language, a general notice, literary and historical, of the Bascuence and other dialects is given.

9. *Mathematics and Natural Philosophy.—Mathematics* (*first year*): Arithmetic; Euclid, i., ii., iii., iv., vi., with Definitions of v. (omitting propositions 27, 28, 29, of book vi.), Todhunter's edition; Todhunter's Algebra for Beginners, to the end of Quadratic Equations with one unknown quantity, together with Involution, Indices, and Surds; Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles. *Mathematics* (*second year*): Arithmetic, Euclid, Algebra, and Trigonometry as before; nature and use

of Logarithms; remainder of Galbraith and Haughton's Plane Trigonometry; Elements of Solid Geometry, including the Mensuration of Surfaces and Solids—Geometrical Conic Sections—the Parabola with the fundamental properties of the Ellipse and Hyperbola—*text-book*, Wilson's "Solid Geometry and Conic Sections," pp. 1-60 and 93-118. The course for the Intermediate University examination consists of the Mathematics for the first two years, except Conic Sections and Solid Geometry. *Mathematical Physics* (*third year*): Galbraith and Haughton's Mechanics (omitting chap. v. of Statics), Hydrostatics, Optics. *Astronomy* (*fourth year*): Galbraith and Haughton's Astronomy—the lectures on this subject are given before Christmas. *Experimental Physics* (*third and fourth years*): 1. *Light*: Theories—Reflection—Refraction—Dispersion—Interference and Diffraction—Double Refraction—Polarisation. 2. *Heat*: Dilatation of Solids, Liquids, and Gases—Specific and Latent Heat—Radiation and Conduction—Mechanical Theory of Heat. 3. *Electricity*: Statical and Dynamical, including Electro-Magnetism, Magneto-Electricity, Thermo-Electricity, Diamagnetism, Electric Measurements, Practical Application to Telegraph, &c. 4. *Magnetism*. 5. *Sound*: Theory of Undulations—Production and Propagation of Sound—Vibrations of Strings, Rods, and Plates—Vibrations of Fluids—Musical Sounds. *Text-books*: Ganot's "Treatise Translated by Atkinson," and Tyndall "On Heat and Sound." This course extends over two years. The lectures in Mathematical and Experimental Physics will be illustrated by apparatus, of which the College has a very good collection.

10. *Geology and Natural History*. — I. *Biological Course*. — *Botany* (*second year*): Vegetable Histology and Organography; Nutrition and Reproduction of Plants; Classification; Descriptive Botany; Flora of Canada; Notices of Palæobotany and Geographical Botany. *Text Book*—Gray or Bessey. A prize of 20 dols. will be given by the Professor for the best collection of plants and the greatest proficiency in their determination. The prize collections or duplicates of them to remain in the College Museum. Candidates must be students in Botany of the previous session. *Zoology and Palæontology* (*third year*): Elements of Animal Physiology—Classification of Animals—Characters of the Classes and Orders of Animals, with Recent and Fossil Examples, taken as far as possible from Canadian Species. *Text book*—Dawson's "Handbook of Zoology," with books of reference.

II. *Geological Course.—Mineralogy and Geology (fourth year)*: (1) *Mineralogy*: Chemical and Physical characters of Minerals, including

Crystallography, the method of determining species, and Descriptive Mineralogy; with special reference to those species most important in Geology, or useful in the Arts. (2) *Lithology and Stratigraphy*: Composition of Rocks and their structure on the small scale; Classification of Rocks—Arrangement of Rocks on the large scale; Stratification, Elevation and Disturbances, Denudation. (3) *Chronological Geology and Palæontology*: Data for determining the relative ages of Formations—Classification according to age—Fauna and Flora of the successive periods—Geology of British America. *Text books*: Dana's "Manuals of Mineralogy and Geology," Dawson's "Lecture Notes on Geology." The lectures in Natural History will be accompanied with demonstrations in the Museum. Students in Natural History are also entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

11.—*Chemistry.—First Year*: A course of lectures preparatory to the Course in Natural Science. The lectures are illustrated by experiments, and treat of the Elementary Constitution of Matter, the laws of Chemical Combination by weight and volume, the Atomic Theory, Chemical Formulæ and Equations, Chemical Affinity, characteristics of Acids, Bases and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements, and many of their compounds, &c. A few lectures are also devoted to the consideration of some of the more important Organic Substances, including Starch, Sugar, Albumen, Alcohol, the Vegetable Acids, &c. During the course attention is called, as far as possible, to the relations of Chemistry to the various manufacturing industries. The laboratory is supplied with the usual apparatus, including a balance by Becker and Sons, spectroscope by Duboscq, Oxy-hydrogen lamp and blowpipe, large gas-holders, &c. *Text-book*: Wilson's "Inorganic Chemistry." In connection with the Lectures on Organic Substances students may consult Roscoe's "Elementary Chemistry," or Fowne's "Chemistry."

12. *Meteorology*: Instruction in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students. Certificates will be granted to those students who pass a satisfactory examination on the construction and use of Meteorological Instruments and on the general facts of Meteorology.

13. *Elocution.*—Students are recommended by the Faculty to avail themselves of the instructions of the Professor, who will make arrangements for evening classes to meet during the session.

Faculty of Applied Science.

The instruction in this Faculty is designed to afford a complete

preliminary training of a technical as well as theoretical nature, to such students as are preparing to enter any of the various branches of the Professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art. Four distinct branches of study are established, viz.: (1) Civil Engineering, (2) Mechanical Engineering, (3) Mining Engineering, (4) Practical Chemistry. Each of these extends over four, or, under certain conditions, three years, and is specially adapted to the prospective pursuits of the student. The third and fourth years in the different branches are each divided into an Ordinary and an Advanced Course, as explained in Section III. The degrees conferred by the University upon such undergraduates of this department as shall fulfil the conditions and pass the examinations hereinafter stated, will be, in the first instance, "Bachelor of Applied Science," mention being made in the diploma of the particular branch of study pursued; and, subsequently, the degree of "Master of Engineering" upon those who have pursued branches 1, 2, or 3, and of "Master of Applied Science" upon those who have pursued Course 4.

Examination for Land Surveyors: Any graduate in the Faculty of Applied Science in the Course of Civil Engineering and Land Surveying may have his term of apprenticeship shortened to one year for the profession of Land Surveyor in Quebec or Ontario, or for the profession of Dominion Land Surveyor. He must, however, pass the Preliminary and Final examinations before one of the Boards of Examiners. The former examination should be passed before entrance into the Faculty, or during the first or second year of attendance. Students of the Civil Engineering Course, who at the beginning of their fourth year give notice to the Faculty of their intention to prepare for the examination for Dominion Topographical Surveyors, will receive special preparation for that examination, more especially in Spherical and Practical Astronomy and Geodesy, and may be exempted from the Steam Engine and Hydraulics or from the Designing of the fourth year. Occasional students may be admitted to the lectures and examinations in the above special work.

MATRICULATION AND ADMISSION.—For entrance into the first year the subjects for examination will be: *Mathematics*—Arithmetic; Algebra, to end of simple equations; Euclid's Elements, books i., ii., iii. *English*—Grammar (including Analysis), Composition, and the leading facts of the History of England. Candidates in the School examinations of the University, who have passed in Geometry, Algebra and English, may be received as matriculated students in the first year. 2. The full course will extend over a period of *four* years, but

candidates may enter the second year, and thus reduce the course to *three* years, if competent to pass a satisfactory examination in the following subjects: Arithmetic; Algebra—to the end of quadratics; Euclid—books i., ii., iii., iv., vi., and xi., and the definitions of book v.; Plane Trigonometry, including solution of triangles; Chemistry—Inorganic, as in Wilson's Elements; English—Grammar (including Analysis), Composition, and the leading facts of the History of England; French or German—French as in De Fivas' Grammaire des Grammaires as far as Syntax, and easy translation. German as in Schmidt's German Guide, Part I., and easy translation. Candidates unable to pass in Chemistry, French, or German, may be allowed by the Faculty to enter and take the first year lectures on Chemistry and German. Candidates who have already completed a portion of a course in some recognised School of Applied Science may be admitted to an equivalent standing, provided they are able to take up the classes and work.

MEDAL, EXHIBITIONS AND PRIZES.—The *Lorne Silver Medal* (the gift of His Excellency the Right Honourable the Marquis of Lorne. Open for competition to *fourth* year students of the three courses of Civil, Mechanical and Mining Engineering. Candidates must take a first-class general standing in their Ordinary course, and the medal will be awarded to the student who stands *first* in the Advanced Course. The *Scott exhibition* (founded by the Caledonian Society of Montreal, in commemoration of the centenary of Sir Walter Scott). An *exemption from fees* will be given to students entering the fourth year as a prize in Descriptive Geometry to be awarded by examination at the beginning of the fourth year. The student enjoying this privilege will be required to give assistance to the professor in the drawing room.

ADVANCED COURSE.—*Third Year*: The Higher Mathematics, Mathematical Physics and Applied Mechanics. *Fourth year*: The Higher portions of Applied Mechanics. All students must take the Ordinary Course. Students who have obtained two-thirds of the marks in the Mathematical subjects of the second year may enter the Advanced Course of the third year, and such students, if they have passed not lower than Second Class in the French or German of the second year, may be exempted from the Modern Languages of the third year.

EXAMINATIONS.—*For the Degree of Bachelor of Applied Science*: There will be a Christmas examination for students of the first year in all the subjects, and for students of the following years in those subjects which they take in the Faculty of Arts. A Sessional exami-

nation will be held at the end of each year. Candidates for the degree of Bachelor of Applied Science are liable to be examined: 1. In all the subjects of the *fourth* year. 2. In the Materials and Applied Mechanics of previous years. 3. In the Pure Mathematics of previous years. 4. In a Problem Paper on the Technical subjects of the whole course. The Problem Paper is not compulsory, but will serve to determine the relative standing of students. Practical Chemistry students are exempted from Nos. 2 and 3 of the above, but are liable for a special examination in Practical Chemistry, Experimental Physics, and Biology. The General Classification for the Degree examination will be under two heads, viz.: 1. Those who have deserved Honourable Mention, in order of merit. 2. Those who have satisfied the examiners, in order of merit. The Degree examinations in Mathematics and Materials are to be held at the Christmas preceding the Final. Certificates of merit may be given to such students as take the highest places in the Degree examinations. Special Certificates may be given for proficiency in particular subjects. Certificates may be given to students who have passed the Special Courses added to the curriculum. Students who take their degree in one of the Courses provided by the Faculty of Applied Science may obtain credit in either of the remaining courses by attending one or more subsequent sessions, the necessary provision for which will be made.

For the Degree of Master of Engineering.—Candidates must be Bachelors of Applied Science of at least three years' standing, and must produce satisfactory certificates of having been engaged during that time upon *bonâ fide* work in either the Civil, Mechanical, or Mining Branch of Engineering. They must pass with credit an examination, which will extend over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have, during the three preceding years, been engaged. The examination will be held once in each year in the second week of the month of December, and will be partly written and partly *vivâ voce*. Notice of the intention of a candidate to offer himself at any examination for this degree must be sent in, together with the necessary certificates and fees, not less than two calendar months before each examination is to be held.

For the Degree of Master of Applied Science.—Candidates must be Bachelors of Applied Science of at least three years' standing, must present certificates of having been employed during that time under competent guidance in some branch of scientific work, and must pass with credit an examination in the Theory and Practice of those

branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

SPECIAL PROVISIONS.—1. Occasional students may be admitted to the Professional Classes upon payment of special fees. 2. Undergraduates in Arts may, if allowed by the Faculty of Arts, be admitted to the Professional Classes in Practical Science on payment of the fees for these classes. 3. Students in Applied Science may, by permission of the Faculty, take the Honour Classes in the Faculty of Arts. 4. Students who have passed the Intermediate in Arts not lower than the Second Class in Mathematics have the privilege of entering the second year in Applied Science, and will be exempted from the Mental and Moral Philosophy and the Greek of the third and fourth years in Arts. 5. Undergraduates in Arts of the second or third years or graduates of any University, entering the Faculty of Applied Science, may, at the discretion of the Professors, be exempted from such lectures in that Faculty as they may have previously attended as students in Arts, but must pass all the examinations.

FEES.—In the Course of Civil Engineering: 45 dols.; Library, 4 dols.; in all, 49 dols. for each session. In the Course of Mechanical Engineering: 45 dols.; Library, 4 dols.; in all, 49 dols. for each session. In the Course of Mining Engineering: first year, 45 dols.; second, third, and fourth years, 55 dols.; Library, 4 dols.; in all, 49 dols. to 59 dols. for each session. In the Course of Chemistry: first year, 45 dols.; second, third and fourth years, 55 dols.; Library, 4 dols.; in all, 49 dols. to 59 dols. for each session. Matriculation fee, for the first year (to be paid in the year of entrance only), 4 dols.; for the second year (exigible from students who enter in the second year, and also from those who have failed in the first year, and re-entered the second year on examination), 6 dols. Fee for degree of Bachelor of Applied Scicnce: 10 dols. Fee for degree of Engineering or Master of Applied Science: 25 dols. The fees must be paid to the Secretary and the tickets shown to the Dean within a fortnight after the commencement of attendance in each session. The B.App.Sc. fee must be paid before the examination. Laboratory students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the students paying 6 dols. per session for their use, and being responsible for breakage. Occasional students may be admitted to the Professional Classes in any year by payment of the ordinary fee for that year, and 5 dols. for entrance and use of the Library. Partial students are required to pay the ordinary Library fee, and in addition, fees to the amount of 10 dols. for each subject; in the case of Chemistry, however, the additional fee

is to be 20 dols., or 10 dols. per term. Students taking Blowpipe Analysis, when it does not form part of their course, are required to pay a fee of 5 dols. Occasional students may attend the course of instruction in Meteorology on paying a fee of 5 dols.

The *Courses of Lectures* embrace: Civil Engineering and Applied Mechanics, Mechanical Engineering, Mining Engineering, Descriptive Geometry and Surveying, Chemistry, Practical Chemistry, Geology, Mathematics and Mathematical Physics, Experimental Physics, English Language and Literature, French or German, and Meteorology.

LIST OF TEXT-BOOKS.—*Engineering*: Rankine's "Civil Engineering," Rankine's "Machinery and Mill Work," Rose's "Complete Practical Machinist," Shelley's "Workshop Appliances." *Applied Mechanics*: Rankine's "Applied Mechanics," Downing's "Hydraulics," Goodeve's "Elements of Mechanism," Willis' "Principles of Mechanism. *Steam*: Rankine's "Steam Engine," Rigg's "Steam Engine." *Descriptive Geometry*: Millar's "Descriptive Geometry." *Surveying*: Gillespie's "Land Surveying." *Geology*: Dana's "Geology," Dana's "Mineralogy," Dawson's "Handbook of Zoology and Lecture Notes on Geology," Nicholson's "Palæontology," "Geological Survey Reports," Dawson's "Acadian Geology." *Blowpipe Analysis*: Brush's "Determinative Mineralogy and Blowpipe." *Chemistry*: Wilson's "Inorganic Chemistry," Fresenius' "Qualitative and Quantitative Analysis." *Mathematics*: Todhunter's "Euclid," Todhunter's "Algebra," Hamblin Smith's "Trigonometry," Wilson's "Solid Geometry and Conic Sections," Loomis's "Analytical Geometry and Calculus," Goodeve's "Principles of Mechanics," Chambers's "Practical Mathematics."

Faculty of Law.

The Lecture Rooms of the Faculty are situated in the Molson's Bank Chambers, in St. James-street. The complete course of study in this Faculty extends over three years; but it may be shortened to two years, when the student matriculates in the third year of his indentures. Students who avail themselves of the privilege of attending two years only will nevertheless be required to pass an examination in the subjects comprised in the three years' course. Matriculated students who do not take the whole course are classed as partial students, and are not entitled to proceed to the degree of B.C.L. Occasional students will be received without matriculation for attendance on any particular series of lectures. Students who have completed their course of three years—or of two years, if they have commenced in the third year of their indentures—and have

passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the degree of Bachelor of Civil Law.

COURSE OF STUDY.—*First Year.*—Legal History. Civil Law: Persons; Property; Ownership. Roman Law: Institutes of Justinian, B. I.; Gaius, C. I.; Maine, chapters i. to iv. Civil and Commercial Law: Obligations. Civil Procedure: Introduction. Criminal Law. Notarial Course: Theory and Practice of Notarial Deeds and Proceedings. *Second Year*: Legal Bibliography. Civil Law: Rents; Transaction; Suretyship. Civil Law: Usufruct; Real Servitudes; Gifts and Wills; Substitutions. International Law. Civil and Commercial Law: Sales. Roman Law: Institutes of Justinian, b. ii. and b. iii. to title 14; Gaius, chaps. ii. and iii.; Maine, chapters v. to viii. Commercial Law: Partnership; Corporations; Bills of Exchange. Civil Procedure: First Part. Criminal Procedure and Election Law. Notarial Course: Theory and Practice of Notarial Deed and Proceedings. *Third Year*: Civil Law: Privileges and Hypothecs; Prescription; Imprisonment in Civil Cases. Civil Law: Successions; Marriage Covenants; Dower. International Law. Commercial Law: Carriage of Persons; Insurance; Bottomry and Respondentia. Roman Law: Institutes of Justinian, b. ii. from title 14; Maine, chapters ix. and x. Civil Law: Mandate; Loan; Deposit; Pledge. Evidence. Commercial Law: Merchant Shipping; Affreightment; Insolvency. Civil Procedure: Second Part. Criminal Procedure and Election Law. Notarial Course: Theory and Practice of Notarial Deeds and Proceedings.

FACULTY REGULATIONS.—Any person desirous of becoming a Matriculated student shall apply to the Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the lectures for each session of the Course. Students are requested to call on the Registrar, who will furnish them with the necessary forms. Candidates for Matriculation must pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics, and Ancient and Modern History, and the books upon which such examination is to be had are from time to time fixed by the Faculty.

Matriculation in the Faculty of Law.—The books at present prescribed are the following: *Latin*—Virgil, Æneid, book i.; Cicero, Orations i. and ii., against Catiline; Latin Grammar. *French*—De Fivas' Grammaire des Grammaires; *Molière, Le Bourgeois Gentilhomme; †Translation into French of Macaulay's Essay on Frederick

the Great; Exercises in Composition and Grammatical Analysis, in English and French. *Mathematics*—Arithmetic; Algebra to the end of simple equations; Euclid, books i., ii., iii. *History*—White's Outline of Universal History (or any equivalent manual), *Green's Short History of the English People; Miles' School History of Canada; †Duruy Histoire de France. *Literature*—*Collier's Biographical History of English Literature; †Laharpe, Cours de Littérature; †Lefranc, Cours de Littérature. *Rhetoric*—Whately's Rhetoric; Blair's Lectures (small edition). *Philosophy*—*Whately's Logic; †La Logique de Port Royal; †Cousin, Histoire de la Philosophie; *Stewart's Outline of Moral Philosophy. N.B.—The works mentioned above preceded by an asterisk are for English students only. Those preceded by a cross are for French students only. The remainder are for both English and French. Students in Law shall be known as of the first, second, and third years, and shall be so graded by the Faculty. In each year, students shall take the studies fixed for that year and those only, unless by special permission of the Faculty. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special examination to be determined by the Faculty; and, if admitted, their names shall be returned in a supplementary list to the Registrar. Persons desirous of entering as occasional students shall apply to the Dean of the Faculty for admission as such students, and shall obtain a ticket, or tickets, for the class or classes they desire to attend. Students who have attended collegiate courses of study in other universities for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty. The *Elizabeth Torrance Gold Medal*, in the Faculy of Law, is awarded to the student who, being of the Graduating Class, having passed the Final examination, and having prepared a thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a Special examination for the medal, which examination shall include the subject of Roman Law. Every candidate before receiving the degree of B.C.L. must make the following declaration:

Ego A.B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

The *fees* exigible in this Faculty are as follows: Matriculation fee.

5 dols.; sessional fee by ordinary students, 20 dols.; sessional fee by occasional or partial students, for each course, 5 dols.; graduation fee, including diploma and case, 10 dols.; additional fee for Notarial students, 10 dols. Matriculation and sessional fees must be paid on or before Nov. 1st, and if not so paid the name of the student will be removed from the books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than 3 dols. Students already on the books of the University shall not be required to pay any Matriculation fee. The course of lectures upon the Theory and practice of Notarial deeds and proceedings is optional to candidates for the profession of law, but is compulsory upon candidates for the Notarial profession; the latter may omit the subject of Civil Procedure. Every candidate for the degree of D.C.L. in Course, under chap. viii., section 4, of the Statutes of the University, shall be required to pass, within four years from his graduation as B.C.L., such examination as shall be prescribed by the regulations of the Faculty of Law; unless he shall have graduated as a B.A. of this University, either in course or *ad eundem*. And not less than two months before proceeding to the degree of D.C.L., the candidate shall deliver to the Faculty of Law twenty-five printed copies of a thesis or treatise upon a subject selected or approved by the Faculty; such thesis to contain not less than twenty-five octavo pages of printed matter, and possessing such a degree of literary and scientific merit as shall, in the opinion of the Faculty, justify them in recommending him for that degree. And in addition to the foregoing qualifications, the candidate shall pay to the Secretary of the Faculty annually during term, for the retention of his name on the books of the Faculty, during the said period of twelve years, a fee of 2 dols., to be added to the Library fund of the Faculty. Except as regards the thesis, this regulation applies only to those who have taken the degree of B.C.L., subsequently to October, 1873. The *examination* under the above rule is as follows: 1. *International Law*: Phillimore; Wharton, Conflict of Laws; Fœlix, Droit International Privé. 2. *Roman Law*: Gaii Commentarii, iv.; Pauli Sententiæ; Pomponii Fragmentum de Origine Juris D. 1, 2.; Novellæ Justiniani, cxviii. cxxvii.; Ortolan, Institutes de Justinien, vol. i.; Mommsen's History of Rome. 3. *Constitutional Law*: Hallam, Constitutional History of England; May, Constitutional History of England; Mill, Representative Government; the British North America Act, and cases thereunder. 4. *Philosophy of Law*: Ahrens, Cours de Droit Naturel; Austin, Jurisprudence; Markby, Elements of Law; Maine, Ancient Law. 5. *Droit Civil et Commercial*: Pothier, Obligations, Vente et Communauté; Marcadé, Obligations, Vente et Communauté; Pardessus, Droit Com-

mercial. The examination will be written and oral; and translation from the Latin, French, or English texts, as well as familiarity with the subject, will be required.

The Higher Examination of Women.

Women over sixteen years of age, who have already received the Senior or Junior Certificates of the University, or who present certificates of education and examination accepted as equivalent by the examiners, may enter on the following examinations, and on passing the same shall be entitled to Certificates as Senior Associates in Arts.

Imperative Examination.—1. Latin and History *or* Greek and History —stated books; (2) Mathematics—Arithmetic, Euclid, Algebra, and Trigonometry; (3) Logic and English.

Optional Examination.—In addition to the above, candidates must pass in at least one, and not more than three, of the following subjects: (1) Chemistry—Inorganic; (2) Botany; (3) Mathematical Physics; (4) Experimental Physics; (5) Biology and Geology; (6) Mental Philosophy; (7) English Literature and Ancient History; (8) French Language and Literature, with Ancient History; (9) German Language and Literature, with Ancient History; (10) Greek or Latin, with History, if not taken in the imperative part of the examination.

LAVAL UNIVERSITY.

There are three terms in each year. The first commences in October, and finishes at Christmas; the second commences in January and ends in Holy week; the third commences shortly after Easter, and terminates about the end of June.

In the Faculty of Arts and Law instruction is given during nine terms; in the Faculty of Medicine during twelve terms.

At the end of each term examinations are held in the subjects in which instruction has been given.

In Theology, the degrees granted are those of Bachelor, Master or Licentiate, and Doctor. The Baccalaureat may be obtained at the end of six terms; the Licence by Bachelors at the end of the third year; the Doctorate by Bachelors of one year's standing.

Arts.—The degrees granted are those of Bachelor, Master or Licentiate, and Doctor. For the Bachelorship or Baccalaureat there are two examinations. The Mastership of Arts is double, *i.e.*, there is one for Letters and one for Science. So with the degree of Doctor in this Faculty.

Law.—The degrees are the same as in Arts.

For further particulars concerning this University address the Rector, Laval University, Quebec, Canada.

University of Toronto.

Faculty of Arts.

Degree of B.A.—There are two ordinary modes of proceeding to the degree of B.A., viz.: (1) by taking a Pass course; or (2) by taking an Honor course.

Entrance.—Candidates may enter this Faculty by passing the Matriculation examination, or the First examination, or the second examination. Candidates entering at the Matriculation or at the First examination must have completed the fifteenth year of their age. Candidates entering at the Second examination must have completed the seventeenth year of their age. All candidates entering at the Matriculation examination must take the Pass subjects in Classics, Mathematics, English, and History and Geography; but French and German may be substituted for Greek by candidates who purpose taking any of the Honour courses except that in Classics, or that in Mental and Moral Science and Civil Polity. All candidates entering at the First examination must take the Pass subjects in Classics Mathematics, and English, specified below under the title of First examination; but French and German may be substituted for Greek by candidates who purpose taking any of the Honour courses except that in Classics, or that in Mental and Moral Science and Civil Polity. Such candidates may present themselves either with the undergraduates in May, or at a special Examination (called the Senior Matriculation) in September. Those candidates who present themselves at the former examination may compete with undergraduates for Honours and scholarships. Separate scholarships are offered for competition among those who present themselves at the latter (Senior Matriculation) examination; but these scholarships are not open to students of any affiliated college. Candidates entering at the Second examination must, in addition to the subjects required from undergraduates of the second year who have matriculated in the ordinary way, pass in the Arithmetic, Algebra, Euclid, and Plane Trigonometry, prescribed for the First examination; but French and German will be allowed as a substitute for Greek to every successful candidate for Honors in any Department except that of Classics, or that of Mental and Moral Science and Civil Polity, who shall signify his intention of continuing to take an Honour course. An undergraduate in the Faculty of Arts, in any university in her Majesty's dominions, may enter by being admitted *ad eundem statum* on special application to the Senate. If such application be for admission to the standing of the third or fourth year in this

University, the Senate will, if it sees fit to grant the same, prescribe the subjects of examination in which such applicant shall be required to pass before proceeding to the degree, having regard to the subjects in which he has already passed satisfactory examinations in his own university. If such applicant be admitted to a lower standing in this University than he held in his own university, he may not compete for Honors or scholarships at the next ensuing examination; but if the examiners report that he was otherwise entitled to be ranked in Honors, he shall, at the next succeeding examination, enjoy the same rights and privileges with respect to necessary subjects as an original undergraduate of this University who has passed an examination of the same merit. The ordinary Annual examination for Matriculation (both Pass and Honours) will commence in the latter part of June. Supplemental examinations for Matriculation will be held in the latter part of September, at which those who were rejected at the June examination, as well as new candidates, may offer; but no Honors or scholarships will be awarded at such examination. The Special examination for entrance at the First examination, previously referred to, will be held at the same time as these Supplemental examinations. Candidates for entrance must produce satisfactory certificates of age and of good conduct. The fee for Matriculation is 5 dols., and must be paid to the Registrar at the time the candidate gives notice of intention to present himself. Candidates who have been rejected at the June examination may present themselves at the Supplemental examination, upon payment of an additional fee of 2 dols. The fee for admission *ad eundem statum* is 6 dols., and must be paid to the Registrar at the time of application.

Regulations.

I. *Regulations relating to all Undergraduates.*—Undergraduates are required to attend as matriculated students one of the colleges affiliated to the University of Toronto, except in those cases in which the Senate, in consideration of peculiar circumstances, shall dispense with this rule; provided, however, that in all cases attendance upon a full course of the lectures of either the second, the third, or the fourth year at such affiliated college shall be required. Every undergraduate who has not received such dispensation from the Senate for any particular year must, before being admitted to examination, produce to the Registrar from the Head of the affiliated college which he has attended during the year a certificate of attendance and of compliance with the requirements of that college. Every undergraduate who proposes to present himself at an examination is required to send to the Registrar, at least three weeks before the day appointed for the

commencement of the examination, a notice (according to a printed form which will be furnished) giving particulars of his standing, the course he is taking, whether Pass or Honours, and the Departments, sub-departments, or subjects in which he proposes to offer himself, together with such other particulars as the printed form may indicate. Notice of the time of commencement of the Undergraduate examinations will be given annually in January, An undergraduate required to take two examinations in French or in German may be permitted to subsitute therefor three examinations in Oriental Languages, upon application to the Senate, giving satisfactory reasons for desiring such substitution.

II. *Regulations relating to the Pass Course.*—In these regulations the term "undergraduate" means a student taking the Pass course. An undergraduate, who is a student in an affiliated college, is not required to pass the First or the third examination in this University; but he must, before proceeding with the Second or Fourth examination, produce a certificate from the Head of such affiliated college that he has satisfactorily passed in all the subjects of the First or the Third examination (as the case may be), and that he has fulfilled the requirements of that college. The subjects of this course are hereafter specified in the form of four successive examinations; but certain options and alternatives are allowed, which are stated in detail under the appropiate headings. The attention of undergraduates is directed to the following

SYNOPSIS.

In Classics	All the four examinations must be passed.
In Mathematics and Natural Philosophy.	The First, Second, and Final examinations must be taken. At the Third examination either this subject or Mental and Moral Science is required.
In English	The First, Third, and Final examinations must be taken.
In History	The Second and Third examinations must be taken.
In French or German.	Each undergraduate must pass the two examinations in (1) French or (2) German, of which the subjects are specified under the headings of First examination and Second examination. The first of these two examinations may be taken at the end of either the First or the Second Year of the course, and they must be taken in consecutive years, unless the Senate shall upon application, founded on special circumstances, permit an interval of two years to elapse between such examinations.
	(Oriental Languages may be accepted as an alternative. *Vide ante.*)

In Natural Sciences	Each undergraduate must pass in consecutive years the two examinations in (1) Chemistry, or (2) Biology, or (3) Mineralogy and Geology, of which the details are specified under the headings of First examination and Second examination; but he may defer the first of these examinations until the end of the Third Year of the course.
In Mental and Moral Science and Civil Polity.	The Second and Final examinations must be taken. At the Third examination either this Department or that of Mathematics must be taken.

Undergraduates below the standing of the fourth year, who have been rejected, or who have been prevented from attending the Annual examinations in May by sickness, domestic affliction, or other causes beyond their control, may present themselves for examination in September, at the times of the Senior Matriculation examination. A candidate who has failed in one subject of examination, but has shown respectable proficiency in the other subjects, may be permitted by the examiners to take it at the next ensuing examination. Candidates who failed to attend at the May examinations must prove to the satisfaction of the Vice-Chancellor, before presenting themselves in September, the existence and sufficiency of the alleged cause of absence. Candidates who were rejected must pay a *fee* of 10 dols. and those who did not attend, a *fee* of 5 dols., before offering themselves for the Supplemental examination. A student, who has been pursuing the Pass course, but who has also succeeded in taking Honours in some Department in any year of his course, may apply to the Senate to be permitted to take such Honour course, as if he had originally entered thereon; and such application may be granted, the Senate having due regard to the subjects on which he has already been examined.

Degree of M.A.—Candidates for the degree of M.A. must have been admitted to the degree of B.A., must be of the standing of one year from admission to the degree of B.A., must have sent in an approved thesis upon some subject in one of the Departments in the Faculty of Arts, and must compose another thesis in the Examination Hall.

Change of Faculty and Joint Matriculation.—Matriculation in the Faculty of Medicine, or in the School of Civil Engineering, or of Agriculture, will not be accepted as a substitute for Matriculation in Arts or in Law; nor will Matriculation in Arts be accepted as a substitute for Matriculation in Law. Candidates for Matriculation may not compete for Honours or scholarships in two Faculties or Schools, nor

in a Faculty and a School. Those who have matriculated in a Faculty or in the School of Civil Engineering may not compete for Honours or scholarships at a subsequent Matriculation examination in another Faculty or School.

Admission ad Eundem Gradum.—A graduate in the Faculty of Arts in any university in Great Britain or Ireland (if his degree be not an honorary one), may be admitted to the same degree in the University of Toronto. All applications for admission *ad eundem statum* or *ad eundem gradum* must be sent to the Registrar, together with the necessary certificates, at least one week before the first meeting of the regular or Special Session of the Senate, at which the application is to be brought forward.

Fees.—The following fees are payable: For matriculation, 5 dols.; for each examination after matriculation, 2 dols.; for change of faculty, 4 dols.; for admission *ad eundem statum*, 6 dols.; for the first degree in the University, 6 dols.; for every subsequent degree, 8 dols.; for admission *ad eundem gradum*, 10 dols. The fee for Matriculation and for each subsequent examination must accompany the application to the Registrar. The fee for admission *ad eundem statum* or for Matriculation upon the certificate of the Head of an affiliated institution, must be paid to the Registrar at the time of the application. The fee for a degree must be paid to the Registrar before the degree is conferred. For fees for Supplemental examinations, *vide ante.*

Subjects of Examination.

Junior Matriculation.—The Pass examination has usually comprised: *Classics*: One book of Xenophon's Anabasis and one book of Homer's Iliad, with selections from Cicero, Virgil, and Ovid, about 300 lines each, according to previous notification; translation into Latin prose, and a paper on Latin Grammar, to which special importance is attached. *Mathematics*: Arithmetic, Algebra to Quadratics, and the first three books of Euclid. *English*: Grammar, Composition, and Critical Analysis of a Selected Poem. *History and Geography*: Ancient and Modern—prescribed periods and places. *French* and *German* are both optional.

DEGREE EXAMINATIONS.—*First*: *Classics*: Usually, portions of Herodotus and Homer (of the latter one book); a portion of Livy; and of Horace's Odes and Virgil's Æneid, one book each; Latin Composition and Grammar. *Mathematics*: Arithmetic, Algebra to end of Progressions; Euclid, the first four and the sixth books, and Definitions of Book V.; Plane Trigonometry, to the Solution of Plane Triangles. *English*: Composition; History and Etymology of the English

Language; Rhetorical Forms; History of English Literature for a prescribed period; *Books of Reference*: Craik—"History of Literature and Learning in England," b. v.; Earle—"The Philology of the English Tongue;" Bain—"English Composition and Rhetoric." *French and German*: Grammar and prescribed books. *Chemistry*: Elementary Inorganic Chemistry. *Text Books*: Fownes's "Manual," vol. i.; Roscoe's "Elementary Chemistry." *Biology*: Rudiments of Animal and Vegetable Physiology; Rudiments of Animal and Vegetable Morphology. *Text Books*: Thomée's "Botany;" Packard's "Zoology." *Mineralogy and Geology*: Elementary Mineralogy; Elementary Geology (including Elements of Physical Geography and Palæontology). An undergraduate taking the Pass course has an option between French and German, but he must pass two consecutive examinations in the language he selects. He is only required to take one branch of the Natural Sciences, namely, Chemistry, or Biology, or Mineralogy and Geology; but he must pass two consecutive examinations in the branch he selects. The only subjects which it is compulsory upon an undergraduate to take at the end of his first year are Classics, Mathematics, and English. He may postpone his First examination in French or German until the end of his second year. If he takes French or German in his first year, he must pass his Second examination in the subject at the end of his second year. If he takes a branch of the Natural Sciences in this year he must take the Second examination in the same branch at the end of his second year; but he may postpone until the end of his third year the First examination in the branch he selects.

Second Examination.—Classics: Usually Thucydides, about sixty chapters; an oration of Demosthenes; and one play; an oration of Cicero, one book of Horace, and one of Virgil; Latin Composition and Grammar. *Mathematics*: Elementary Mechanics (statics of Solids and Dynamics of a Particle). *French*: Prescribed books; Grammar; Translation into French; Translation from French authors not specified. *German*: Similar requirements, but instead of Translation into German, Outlines of German Literature, prescribed period. *History*: Ancient and Mediæval (authors prescribed in "Calendar"). *Chemistry*: Inorganic. *Biology*: The subjects of the First examination in greater detail, comprising papers on Zoology and Botany. *Zoology*: 1. Morphology, including (*a*) Histology, Anatomy, and Development; (*b*) Special Morphology of the Classes and Orders of the Animal Kingdom. 2. Physiology, including the relations of Animals to Climate, &c. (Animal Geography); 3. Palæontology (subsidiary). *Botany*: 1. Morphology, including (*a*) Histology, Anatomy,

and Development; (*b*) Special Morphology of the Classes and Orders of the Vegetable Kingdom. 2. Physiology, with the Geographical Distribution of Plants. 3. Vegetable Palæontology (subsidiary). *Text Books*: Sachs's "Text Book of Botany"; Huxley's "Vertebrata;" Huxley's "Invertebrata." *Mineralogy and Geology*: Physical and Chemical Characters of Minerals, including Crystallography and the Application of the Blowpipe; Systematic and Descriptive Mineralogy; Physical Geography, Palæontology, Structural and Historical Geology. *Logic and Mental Philosophy*: *Logic*: Names, Notions, Propositions, Syllogisms. *Mental Philosophy*: The Senses, the Intellect, the Emotions. The compulsory subjects of this year are: Classics, Mathematics, History, French or German (either first or second examination), Logic and Mental Philosophy. A candidate who has taken the first examination in French or German, or in any branch of the Natural Sciences, must pass the second examination this year. A candidate who did not take French or German in the first year must, this year, pass the first examination in either of these languages.

Third Examination.—Classics: In Greek usually an oration and a play; in Latin, a book of Horace, and a selection from an Historian. *Mathematics*: Hydrostatics (statics of fluids); Geometrical Optics. In *English*, the study of a prescribed poetical selection is required; and in *Mental and Moral Science and Civil Polity*, examination must be undergone in two or three text books as announced. A candidate who has not already taken the first examination in a branch of the Natural Sciences must do so this year. If he took such examination at the end of the second year, he must take the second examination this year. The other compulsory subjects of this year are: (1) Classics; (2) Mathematics, *or* Mental and Moral Science and Civil Polity; (3) English; (4) History; (5) French or German for the candidates who passed the first examination therein at the end of the Second Year.

Final Examination.—Classics: In Greek, usually Plato, Republic, one book, together with a particular play or oration announced; in Latin, selected portions of Tacitus, Juvenal, and Persius, Latin Composition and Grammar. *Mathematics*: Two of these three, viz., Sound, Heat, Plane Astronomy. *English*: Principles of Composition, Grammar, and Etymology; History of the Formation of the English Language; Philology of the English Language (Earle); History of Literature from Dryden to Wordsworth; Craik, History of Literature and Learning in England, bb vi. and vii. *Logic*: Induction and the Subsidiary Operations. Candidates who have not previously passed their second examination in a branch of the Natural Sciences must do so at this examination.

University Medals, Prizes, and Scholarships.

Medals.—One *gold* and one *silver medal* may be given upon the special recommendation of the examiners, to the students who, at the Final examination for the degree of B.A., with Honours, have been placed respectively first and second in the First Class in any of the departments, viz: Classics; Mathematics; Modern Languages, with History; Natural Sciences; Mental and Moral Science and Civil Polity.

No candidate for Honours in Modern Languages can receive the recommendation for the gold or the silver medal unless he has been placed in the First Class of the sub-departments of English, French, German, Italian, and History. No candidate for Honours in Natural Sciences can receive the recommendation for the gold or the silver medal unless he has been placed in the First Class of the sub-departments of Chemistry, Biology, and Mineralogy and Geology.

Prizes.—A *prize* of the value of 10 dols. *in books*, will be given to the candidate who has been placed first in the First Class in Meteorology. A *prize* of the value of 10 dols. *in books* will be given to the candidate who, at any of the four examinations of undergraduates, has been placed first in the First Class in Oriental Languages. *Prizes*, each of the value of 10 dols. *in books*, may be awarded annually among undergraduates in Law, Medicine, or Arts, for the best Compositions in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, and German Prose. *Certificates of honour* will be given at each examination to those students who have been placed in the First Class in any Department.

Scholarships.—The following *scholarships* are annually offered for competition among candidates for Honours in this Faculty: *At the Junior Matriculation Examination*: one in Classics, of 120 dols.; one in Mathematics, of 120 dols.; * one in English, French, German, and History, of 100 dols.; four for General Proficiency in all the subjects appointed for this examination, one being of 120 dols.; one being of 100 dols.; one being of 80 dols.; one being of 60 dols. *At the Senior Matriculation Examination*: One in Classics, of 120 dols.; one in Mathematics, of 120 dols.; one for General Proficiency in all the subjects, of 120 dols. *In the First year*: One in Classics, of 130 dols.; one in classics, of 100 dols.; one in Mathematics, of 130 dols.; one in Mathematics, of 100 dols.; one in Modern Languages, of 100 dols.; two for General Proficiency in all the subjects, one being of 100 dols., and the other of 50 dols. *In the Second Year*: One in Classics, of 150 dols.; one in Classics, of 100 dols.; one in Mathematics, of

* This scholarship may be awarded to a candidate who has obtained First Class Honours in three out of four Sub-departments.

150 dols.; one in Mathematics, of 100 dols.; one in Modern Languages, with History, of 120 dols.; one in Natural Sciences, of 120 dols.; one in Mental and Moral Science, of 120 dols.; two for General Proficiency in all the subjects, one of 75 dols., and the other of 50 dols. *In the Third Year:* One in Classics, of 150 dols.; one in Classics, of 100 dols.; one in Mathemathics, of 150 dols.; one in Mathematics, of 100 dols.; one in Modern Languages, of 150 dols.; one in Natural Sciences, of 150 dols.; one in Mental and Moral Science, of 150 dols.; one in History, Civil Polity, &c. (Blake Scholarship), of 100 dols. *For Junior Matriculation*: Greek, 220 dols.; Latin, 220 dols.; Mathematics, 440 dols.; English, 150 dols.; History and Geography, 100 dols.; French, 100 dols.; German, 75 dols. *For Senior Matriculation and for the First Year*: Classics, 500 dols.; Mathematics, 500 dols.; English, 200 dols.; French, 125 dols.; German, 125 dols. *For the Second Year*: Classics, 600 dols.; Mathematics, 600 dols.; English, 140 dols.; French, 140 dols.; German, 120 dols.; History, 200 dols.; Chemistry, 150 dols.; Biology, 150 dols.; Mineralogy and Geology, 150 dols.; Logic, 120 dols. The remaining subjects in the Department of Mental and Moral Science other than Logic, 200 dols.

Prince of Wales Scholarship.—At the Junior Matriculation examination the sum of 50 dols., being the annual proceeds of the fund presented by his Royal Highness the Prince of Wales, on the occasion of his admission *ad eundem statum.*

Blake Scholarship.—Of the value of 100 dols., offered annually. Awarded to the candidate in the third year who, having obtained First Class Honours in each of the sub-departments of History and Civil Polity, passes the best examination on the Pass and Honour work in History (not including Ethnology) and Civil Polity, as laid down in the curriculum for that year, with the following additional subjects: Taswell-Langmead's English Constitutional History; Broom's Constitutional Law; Maine's Early History of Institutions.

Faculty of Law.

Degree of LL.B.—The following are the requisites for obtaining the degree of LL.B. in the ordinary course: Having produced satisfactory certificates of good conduct. Having matriculated in the Faculty of Law. Being of the standing of four years from matriculation. Having passed in each of those years the examination prescribed in the Statute respecting "Subjects of Examination in the Faculty of Law." Being of the full age of twenty-one years. Any person who has been admitted a Barrister by the Law Society of Upper Canada, on production of satisfactory certificates, may enter the Faculty of

Law at the Second Year's examination. A graduate in the Faculty of Arts in the University of Toronto, or an undergraduate of the standing of the third or fourth year in the Faculty of Arts, may enter the Faculty of Law at the Second Year's examination; but no student who has obtained his standing in the University of Toronto by admission *ad eundem statum* from another university can exercise this privilege, unless he has passed at least one examination in the Faculty of Arts in the University of Toronto.

The degree of LL.B. may also be conferred after one *Special examination*, at which no Honours will be awarded, if the candidate be a Master of Arts of seven years' standing in the University of Toronto, or a Barrister of seven years' standing from his admission by the Law Society of Upper Canada, or if he be a graduate in the Faculty of Arts in the University of Toronto of three years' standing, being also a Barrister admitted by the Law Society of Upper Canada.

Degree of LL.D.—The following are the requisites for obtaining the degree of LL.D.: Having been admitted to the degree of LL.B. Being of ten years' standing from admission to the degree of LL.B. or of M.A. Having composed two approved theses upon subjects in Law. The candidate is allowed to state the two departments from which he elects that the subjects of his theses are to be chosen, according to the following scheme: Department I. Civil Law; II. Constitutional Law; III. Real Property; IV. International Law; V. Other branches of Law mentioned in the Curriculum. The theses are to be written in the Examination Hall in the presence of one of the examiners, and the subjects of the theses are then announced.

Fees.—The following fees will be required: For Matriculation or Entrance, 5 dols.; for each examination after matriculation, 2 dols.; for the degree of LL.B., 6 dols.; for the degree of LL.B., after Special examination, 20 dols.; for the degree of LL.D., 20 dols. For admission *ad eundem gradum*, 20 dols. The fee for matriculation, and for each subsequent examination, must be paid to the Registrar before the candidate offers himself for the examination. The fee for a degree must be paid to the Registrar before the degree is conferred.

Examinations.—The examinations will take place in the month of May. Notice of the day when they commence will be given early in January. Every student, who proposes to present himself at any examination, is required to send to the Registrar, at least three weeks before the day appointed for the commencement of the examination, a paper (according to a printed form which will be provided), stating his standing, and whether he is a candidate for Honours or otherwise. Matriculants who have been rejected, or who have been prevented from

attending the Annual examinations in May by sickness, domestic affliction, or other causes beyond their control, may present themselves for examination in September, at the time of the Supplemental examinations in Arts, upon payment of an additional fee of 2 dols. Undergraduates in this Faculty below the standing of the fourth year, who have been rejected, or who have been prevented from attending the Annual examinations in May by sickness, domestic affliction, or other causes beyond their control, may present themselves for examination in September, at the time of the Supplemental examinations in Arts. The fee for such Supplemental examination is 10 dols. for those who were rejected at the Regular examinations, and 5 dols. for those who did not attend them. Candidates who failed to attend at the May examinations must prove to the satisfaction of the Vice-Chancellor, before presenting themselves in September, the existence and sufficiency of the alleged cause of absence.

Scholarships.—Four scholarships for general proficiency will be annually offered for competition—viz., one among matriculants; one among students of one year's standing; one among students of two years' standing; one among students of three years' standing. Each scholarship is of the value of 120 dollars a year. If the scholarship shall not have been taken at the examination for Matriculation, or for the first year, a scholarship may be awarded, on the recommendation of the examiners, to a candidate entering the Faculty at the second year, in addition to the ordinary scholarship for that year. Each scholarship is tenable for one year, but the scholar of one year is eligible for the scholarship of the succeeding year. No scholarship will be awarded to any candidate at Matriculation, or at the examination for the first year, unless he shall have obtained First-class Honours in two Departments, one of which shall be either Classics or Mathematics; nor in the second or third years unless he shall have been placed in the First Class of Honours. All scholars will be required to sign a declaration that it is their intention to proceed to a degree in the Faculty of Law in the University of Toronto.

Medals, Prizes, and Certificates of Honour.—One *gold* and one *silver medal* may be given upon the special recommendation of the examiners to the students who, at the Final examination for the degree of LL.B., have been placed respectively first and second in the First Class of Honours. *Prizes*, each of the value of 10 dols. in books, may be awarded annually among undergraduates in Law, Medicine, or Arts, for the best Composition in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, and German Prose.

Certificates of Honour will be given at each examination to those students who have been placed in the First Class of Honours.

Subjects of Examination.

MATRICULATION.—*Classics, Mathematics, English, French,* and *German,* as in First examination for Arts degree. *History and Geography*: as prescribed.

For Honours and for the Scholarship candidates are examined in additional classical subjects, with translation from English into Latin Prose, and paper on Greek and Latin Grammar. *Mathematics*: Algebra; Plane Trigonometry.

Modern Languages.—English: Prosody; Rhetoric; History of the Language and Literature; Abbott and Seeley's English for English People; Bain's English Composition and Rhetoric; History of English Literature, Chaucer to Surrey; Craik's History of Literature and Learning in England, b. iii., iv.; Marsh's English Language and Literature—lectures vi. to xi. (inclusive); Prologue to Canterbury Tales; The Nonne Preste, His Tale; Morris's Chaucer's Prologue, &c. (Clarendon Press); Critical Reading of one of Shakespeare's Plays. *French*: Prescribed books; Translation from French authors not specified; Translation from English into French Prose. *History*: May's History of the Long Parliament.

FIRST YEAR.—*Classics, Mathematics, French,* and *History,* as in Second Year Arts examination.

Logic and Mental Philosophy.—Formal Logic (Jevons's); The Origin of Knowledge (Locke's Essay on the Human Understanding); Systematic Exposition of the Phenomena of the Human Mind (Read's Essays on the Intellectual Powers).

HONOURS.—Candidates for Honours and for the Scholarship will be examined in additional subjects.

SECOND YEAR.—Political Economy (Rogers); Constitutional History (Taswell-Langmead); Equity (Snell); Law of Contracts (Pollock); Law of Real Property (Williams); Hallam's Middle Ages, c. ii.

THIRD YEAR.—Constitutional History (May); Law of Evidence (Best); Law of Torts (Underhill); Law of Real Property (Burton; Fawcett on Landlord and Tenant); Roman Law (Gibbon, chap. xliv.; Arnold, chaps. xiii., xiv., xvi., and xxvi.; Tomkins and Jencken's Compendium).

CANDIDATES FOR LL.B.—Constitutional Law (Broom); Law of Real Property and Wills (Dart's Vendors and Purchasers; Theobald on Wills); Roman Law (Justinian, Sandars's Edition); Jurisprudence

(Maine's Ancient Law); International Law (Kent, by Abdy; Von Savigny); Common Law (Broom).

Additional for Honours.—Constitutional Law (Forsyth); Jurisprudence (Lorimer's Institutes).

SPECIAL EXAMINATION FOR LL.B.—Constitutional History (Taswell-Langmead, May); Constitutional Law (Broom); Law of Real Property and Wills (Dart's Vendors and Purchasers; Theobald on Wills); Common Law (Broom); Roman Law (Gibbon, chap. xliv.; Arnold, chaps xiii., xiv., xvi., and xxvi.; Tomkins and Jencken's Compendium; Justinian, Sandars's Edition); Jurisprudence (Maine's Ancient Law); International Law (Kent, by Abdy; Von Savigny).

UNIVERSITY COLLEGE, TORONTO.

STUDENTS.—The regular students of the College are those who have passed the Matriculation examinations in Arts, Civil Engineering, or Agriculture, in any University in her Majesty's dominions; and Matriculants, who are students taking the full undergraduate course. Matriculated students are required to attend the lectures and examinations on all the subjects necessary for students of their respective standings. Certificates of attendance, during one or more academic years, will be given to those matriculated students and matriculants who have been regular in their attendance on the required lectures, and who have passed the prescribed examinations. Matriculated students are required to reside, during the period of their attendance on lectures, in the College, or in houses selected by their parents or guardians, or approved by the President. Non-matriculated students may be admitted to lectures on application to the professors in the respective departments. Certificates of attendance on lectures in any department during an academic year may be given to non-matriculated students who have been regular in their attendance, and who have also passed the examinations in such department.

Resident Students.—The fee payable for resident students, for board and rent of room, varies from 3½ dols. to 4 dols. per week. All fees of undergraduates are to be paid in advance per month or per quarter; of graduates, per quarter.

Course of Study in Arts.

The courses of lectures and the practical instruction given in the Physical, Biological, Geological, and Chemical laboratories are carried out in accordance with the requirements of the University of Toronto, both in Pass and Honour courses, for the degree of Bachelor of Arts.

Fees.—The following is the scale of fees for lectures: For *matriculated students* in Arts, Civil Engineering, or Agriculture: For

academic year, 10 dols.; for Michaelmas term, 5 dols.; for Easter term, 7 dols. For *non-matriculated students*: One Course of Lectures: Six or five in each week, for academic year, 6 dols.; for Michaelmas term, 3 dols.; for Easter term, 4 dols. Four or three in each week, for academic year, 4 dols.; for Michaelmas term, 2 dols.; for Easter term, 3 dols. Two or one in each week, for academic year, 3 dols.; for Michaelmas term, 1 dol.; for Easter term, 2 dols. Three Courses of Lectures: A reduction of one dollar for each course for academic year; or half-a-dollar for each course per term. All the Courses: For academic year, 20 dols.; for Michaelmas term, 10 dols.; for Easter term, 12 dols. The above fees are to be paid in advance.

Terms.—1. The academic year consists of two terms; the first (Michaelmas) extending from October 1st to December 22nd; and the second (Easter) from January 4th to May 31st. 2. The term will not be allowed to students who have been reported to the President by any of the professors as neglecting to attend the required lectures; or who have not passed the prescribed examinations, or have not conformed to the other Statutes or Regulations of the College, or have been reported to the Council for bad conduct.

College Examinations.—1. All Matriculated students are required to attend the College examinations in every department or branch prescribed by the University of Toronto as necessary for their respective standings. 2. Prizes and Honours are awarded in each department on the results of the examinations at Easter, with additional examinations at Christmas, at the discretion of each professor or lecturer. 3. Candidates for Prizes or Honours are arranged, according to their proficiency, in two classes, and those who are not candidates for Prizes or Honours, or who fail to obtain Honours, are similarly arranged in the Third Class; but no name of a candidate for Honours shall be entered on the Class Lists until he has passed in all the prescribed subjects. 4. Certificates of Honour in each department are awarded to those students who have been placed in the First Class at the examinations. 5. Matriculated students, who are not candidates for Honours, if they have kept term, and pass the College examinations during the first and third years of their course, are not required to attend the University examinations for those years. 6. Non-matriculated students are not required to attend the examinations unless they are candidates for Prizes or Honours, or desire to obtain certificates of attendance.

Prizes.

1. *The Macdonald Scholarship.*—The Macdonald Scholarship, of the value of 50 dols., will be awarded to the student ranking highest in

general proficiency in the College examinations of the First Year who shall be in attendance in the following year, provided he shall have obtained First-class Honours in one Department, and First or Second-class Honours in another Deparment.

2. *The Governor-General's Medal.*—His Excellency the Marquis of Lorne, having presented a silver medal for annual competition, it will be awarded to the student of the second year who, having taken First-class Honours in the College examinations in one department, and First or Second-class Honours in another department, shall rank highest. The relative proficiency of different candidates is estimated on the Honour work of the two departments alone.

3. *Prizes in Books.*—The following are the prizes offered for competition in the College:

SUBJECT.	VALUE. First Year. Dols. Cts.	Second Year. Dols. Cts.	Third Year. Dols. Cts.	Fourth Year. Dols. Cts.
Greek and Latin	10 00	10 00	10 00	10 00
Mathematics & Natural Philosophy	10 00	10 00	10 00	10 00
English	5 00	7 50	10 00	10 00
History		5 00	10 00	
Ethnology				10 00
French	5 00	7 50	10 00	10 00
German	5 00			
Italian				
Chemistry	5 00	5 00	10 00	10 00
Zoology and Botany		5 00	10 00	10 00
Mineralogy and Geology		5 00	10 00	10 00
Meteorology				5 00
Logic		5 00		
Metaphysics and Ethics.		10 00	10 00	10 00
Hebrew	5 00	5 00	10 00	
Chaldee				
Hebrew, Chaldee, Syriac, Arabic (any three)				10 00
Agriculture	5 00	10 00		10 00
Greek—Latin—English Verse			10 00 each.	
French—German Prose—English Essay				
Public Speaking—Public Reading				

UNIVERSITY OF TRINITY COLLEGE.

Candidates for degrees must, before graduating, take the Oath of Allegiance.

Matriculation.

A candidate for admission is required to produce testimonials of good conduct, and to pass an examination in the following subjects: *Divinity*, including Scripture History and selected portions of the Greek Testament; *Classics*, selected portions of easy Latin and Greek authors; *Ancient History*, prescribed periods (Liddell's "Rome" and

Dr. Smith's "Greece" recommended); *Mathematics*, elementary; and *French*, grammar and translation. On a more advanced examination, three *scholarships* of the respective values of 200 dols., 140 dols., and 100 dols., are offered.

The examination begins on October 1st, unless that day should fall on Sunday or Monday, when it will begin on the Tuesday following. For further particulars application may be made to the Provost, Trinity College, Toronto. Every candidate for admission must have entered on his sixteenth year. The tuition fees for resident students are 55 dols. per annum, and for non-resident students 65 dols. per annum. The charge for rent of rooms and board of resident students is 165 dols. per annum. These fees are payable in instalments, terminally, in advance, and on payment being made during the first fortnight of term, a discount of 10 per cent. is allowed, thus reducing the annual charges to 198 dols. and 58 dols. 50 cents for resident and non-resident students respectively. Students whose parents do not live in Toronto are required to reside in College, unless they have obtained the permission of the Corporation to live out of College, which permission will be granted only in very special cases.

Proceedings in Arts.

All candidates for the *degree of B.A.* must be matriculated students of Trinity College, and have kept nine complete terms. They will be required by the University to pass three examinations. Residence and attendance at lectures may, however, be dispensed with in individual cases, in which application to that effect shall have been made to the Corporation, and the grounds assigned by the applicant unanimously approved by the Corporation. In such cases the applicant must not be less than twenty-five years of age, and will be required to pass the Matriculation examination, the examination at the end of the First Year, the Previous, and the Final examinations at intervals not less than those which are prescribed in the case of resident students, and to pay for each examination which he undergoes, in addition to the fees for matriculation and degree, the sum of 5 dols. to the University chest. The permission to proceed to a degree in this manner by examinations only must be given by the Corporation before the candidate presents himself for the matriculation examination.

I. *First Year Examination.*—This examination will take place in the case of students entering the Michaelmas term, at the end of the first year. The *subjects* for this examination will be: *Divinity*: One of the Historical Books of the New Testament in Greek; Church Cate-

chism. *Classics*: Portions of two Greek and two Latin authors; Greek and Latin Grammar; Latin Prose Composition. *Mathematics*: Euclid, i., ii., iii., iv., vi.,; Algebra, to Binomial Theorem inclusive; Trigonometry to Solution of Triangles inclusive. *Chemistry*: Chemical Physics and Chemistry of the Non-metallic Elements. *French*: Grammar to Syntax, and a portion or portions of some standard French author or authors. The particular authors are announced at the beginning of the Lent term of the preceding year. The names of students who pass this examination will be arranged in three classes, in alphabetical order; the first class consisting of those who shall have obtained at least half the whole amount of marks in each subject; the second, of those who shall have passed creditably, though below this standard; the third, of those to whom the examiners shall have only not refused their certificate of approval.

II. *The Previous Examination.*—This examination takes place, in the case of students entering in the Michaelmas term, at the end of the second year. The subjects for this examination will be: *Divinity*: One of the Historical Books of the New Testament in Greek; Evidences of Christianity; Church Catechism. *Classics*: Portions of two Greek and two Latin authors; Greek and Latin Grammar; Latin Prose Composition. *Mathematics*: Euclid, books i., ii., iii., iv., vi.; Algebra, to Binomial Theorem inclusive; Trigonometry, to Solution of Triangles inclusive; Elementary Statics. *Chemistry*: General Chemistry. *French*: Grammar, and portions of some standard French authors. The particular authors are announced at the beginning of the Lent term of the preceding year. The names of students who pass this examination will be arranged in the same manner as in the case of the First Year examination. Any student who shall have obtained a first-class in the previous examination, and shall also have passed a satisfactory examination in the Honour subjects in Classics at the end of the second year, shall be allowed to declare for Classical Honours, and shall be exempted from attendance at Mathematical lectures during the third year. The like exemption will be granted on the like conditions (*mutatis mutandis*) to Mathematical students.

III. *Examination for the Degree of B.A.—Pass Examination.*—The regular time for passing this examination is at the end of the ninth term of residence. All students not candidates for Honours, intending to proceed to the degree of B.A., must go through this examination. The list will be published in the College Hall, in alphabetical order. Students who shall have been allowed to declare for

Classical Honours at the end of the second year, and shall have passed a satisfactory examination in the Honour subjects in Classics at the end of the third year, shall be exempted from examination in the Mathematical subjects of the ordinary examination for B.A. The like exemption will be granted on the like conditions (*mutatis mutandis*) to students who have been allowed to declare for Mathematical Honours. The *subjects* for this examination are: *Divinity*: Scripture History; one of the Historical Books of the New Testament in Greek; the Articles of the Church of England. *Classics*: One or more books of two Greek and two Latin authors; Latin Prose Composition; Greek and Latin Grammar; Greek and Roman History. *Mathematics*: Euclid, books i., ii., iii., iv., vi.; Algebra, to Binomial Theorem inclusive; Plane Trigonometry, to Solution of Triangles inclusive; Statics; Hydrostatics; Optics. *French*: Grammar, and portions of some standard French authors. The particular authors are announced at the beginning of the Lent term of the second year. Those students who shall have been rejected at the regular examination of their own year, or who shall have been absent from such examination, may present themselves at a Supplementary examination which will be held in the beginning of the Michaelmas term, and those who then fail to pass will be required to attend the same examination of the succeeding year. Students who have failed at their annual regular examination in not more than three departments, or their equivalent (Classics and Mathematics each being reckoned as two for this purpose), may be permitted, if the examiners think fit, to present themselves for examination in those departments at the following Supplementary examination. The examination list will be published in the usual way, and candidates must make their own arrangements for learning the result, as the Registrar cannot undertake the duty of conveying the information to each. Students proposing to attend the Supplementary examination are required to pay a fee of five dollars, which fee, together with a notice of his intention to present himself for examination, the candidate must transmit to the Registrar on or before the 10th of September.

Fees.—For matriculation, 5 dols.; for degree of B.A., 16 dols.; for degree of B.A. at a Special Convocation, 24 dols.; for degree of M.A., 24 dols.; annual payment of members of Convocation and of Corporation, 5 dols.

Proceedings in Divinity.

Divinity Class.—1. The following persons may be admitted to the Divinity Class: Graduates in Arts of Trinity College, or other uni-

versities recognised by Trinity College,* graduates of the University of Toronto who have been *resident* students and undergraduates of Trinity College who have attended the lectures of the Arts Course for at least one year, provided that they have obtained the approval of the Provost and Professors, and are of the full age of twenty-one years. Graduates of other universities in Canada are also admitted to the Divinity Class under the following conditions: 1. That they shall have proceeded to their degree by residence, and not simply by examination. 2. That they shall have graduated in Honours, or have taken an ordinary degree, passing an examination in Classics and Mathematics. 3. That they shall pass an examination in Trinity College in all the Divinity subjects for the B.A. examination: viz., Scripture History, the Thirty-nine Articles of the Church of England, and the Acts of the Apostles in Greek. 4. That they shall be recommended by the Bishop of the diocese in which they reside, or in which they propose to serve.

Bachelor of Divinity.—Candidates for this degree must be Masters of Arts of at least seven years' standing. The requisite exercises are: A Latin and an English thesis; the one on some point of doctrine connected with the Thirty-nine Articles, and the other on some Scriptural subject, to be appointed by the examiners. An examination must also be passed in some Latin or Greek treatise or treatises chosen by the examiners. An English sermon must be preached before the University.

Doctor of Divinity.—Candidates must be Bachelors of Divinity of five years' standing. They will be required to write an English and a Latin thesis, as in the case of B.D., and to preach an English sermon before the University.

Fees.—For the degree of B.D., 40 dols.; D.D., 100 dols.

Proceedings in Law.

Degree of B.C.L.—Candidates must be Bachelors of Arts of three years' standing, and must have passed the examinations required by the Law Society for the degree of Barrister-at-Law, and have been admitted to that degree.

Degree of D.C.L.—Candidates must have been Bachelors of Civil Law for a period of five years, and must have written a thesis on a given subject.

Fees.—For B.C.L., 24 dols.; D.C.L., 40 dols.

* These Universities are: Oxford; Cambridge; Trinity College, Dublin; Durham; King's College, Windsor, Nova Scotia; King's College, Fredericton, New Brunswick; Bishop's College, Lennoxville; and the late King's College, Toronto.

Scholarships and Prizes.

Besides the three Matriculation scholarships already mentioned, the College awards other *scholarships* of the respective values of 200 dols. 140 dols., and 100 dols., tenable for one year; and of the value of 160 dols., tenable for two years. Various *exhibitions* and *bursaries* are likewise offered. The holders must, however, in all cases, attend Honour lectures and satisfy the examiners therein. A number of *prizes* are provided for special subjects.

QUEEN'S UNIVERSITY AND COLLEGE, KINGSTON, CANADA.

Faculty of Arts.

Matriculation.—There are two Matriculation examinations, a Junior and a Senior. Candidates who pass the Junior examination take rank as undergraduates of the first year, and those who pass the Senior examination take rank as undergraduates of the second year. In both of these examinations the candidate is required to pass in *one* of the following groups of subjects: (1) Latin, Greek, English, Mathematics; (2) French and German, Greek, English, Mathematics; (3) French and German, Latin, English, Mathematics. Candidates who have passed the High School Intermediate are exempted from examination in the English and Mathematics of the Junior Matriculation, unless they desire to compete for rank or scholarships.

Degree of B.A.—The course of study for students who have passed the Junior Matriculation examination extends over four sessions, and for students who have passed the Senior Matriculation examination, over three sessions. Junior matriculants must take *one* of the following groups of subjects: (1) Junior Latin, senior Latin, junior Greek, senior Greek, junior Mathematics; (2) junior French and German, senior French and German, junior Greek, senior Greek, junior Mathematics; (3) junior French and German, senior French and German, junior Latin, senior Latin, junior Mathematics. Senior matriculants must take *one* of the following groups: (1) Senior Latin, senior Greek; (2) senior French and German, senior Greek; (3) senior French and German, senior Latin. All students must take the classes of junior Philosophy (Mental and Moral), English Literature (junior and senior), junior Physics or junior Chemistry, together with *one* of the following groups: (1) History, senior Philosophy; (2) History, senior Mathematics; (3) senior Mathematics, senior Philosophy; (4) senior Mathematics, senior Physics; (5) senior Chemistry, senior Mathematics; (6) senior Chemistry, senior Philosophy; (7) senior Chemistry, History; (8) senior Chemistry, Natural Science; (9) senior Mathematics, Natural

Science; (10) Natural Science, senior Philosophy; (11) senior Physics, History; (12) senior Physics, Natural Science. The class of Senior Mathematics must be taken before the class of Senior Physics. The candidate for graduation must, in each session, pass an examination upon the subjects he has studied; but he is not allowed to present himself for examination upon more than three subjects at one time, unless he has previously failed in some subject. To pass in any subject the candidate must obtain at least *two-fifths* of the number of marks; but if at the same examination he obtains Honours in any subject, he may pass in the other subjects upon which he has been examined by obtaining *one-third* of the marks in each subject. In exceptional cases the Senate may allow a candidate to come up for examination without attendance on classes, but he will be examined not only on the class-work indicated in the Calendar, but also on work specially prescribed. Graduates of other colleges are admitted *ad eundem gradum* on producing satisfactory proof of rank and character.

Degree of M.A.—This degree is conferred upon the candidate who obtains first-class Honours in Mathematics, Physics, or any two of the subjects appended, or the equivalent in second-class Honours (second-class Honours in two subjects being equivalent to first-class Honours in one): (1) Latin, (2) Greek, (3*) French and German, (4) Mathematics, (5) Natural Science, (6) Physics, (7) Chemistry, (8) Mental Philosophy, (9) Moral Philosophy, (10) English Literature, (11) History, (12) Political Economy. The degree cannot be obtained until one year after the date of graduation as B.A. The candidate must compose a satisfactory thesis in connection with one of the subjects in which he has taken Honours. The thesis must be sent in to the Secretary of the Senate not later than the last day of March.

Degree of D.Sc.—This degree is conferred upon candidates who, after taking the degree of M.A., obtain first-class Honours in all of the subjects in one of the following groups, except those in which they have obtained such Honours: A. (1) Latin, (2) Greek, (3) French and German, any two; (4) English Literature; (5) History; (6) Mental Philosophy; (7) Moral Philosophy; (8) Political Economy. B. (1) Latin, (2) Greek, (3) French and German, any two; (4) Chemistry; (5) Natural Science; (6) Mental Philosophy; (7) Moral Philosophy. C. (1) Latin, (2) Greek, (3) French and German, any two; (4) Mathematics; (5) Physics; (6) English Literature; (7) History; (8) Political Economy; any one. D. (1) French and German; (2) Chemistry; (3) Natural Science; (4) Mathematics; (5) Physics; (6) History; (7) English Literature; (8) Political Economy; any one. The degree cannot be obtained until two

* French and German count as one subject.

years after the date of graduation as M.A. After passing the required examinations, the candidate must compose, and send in to the Secretary of the Senate, not later than the last day of March, a series of three or more lectures on some topic connected with one of the departments of study in which he has passed. These lectures he will be expected to deliver, in the first session after he has obtained the degree, to the students in the department chosen. Candidates who already possess the degree of B.Sc. may obtain the degree of D.Sc. by conforming to the foregoing regulations. Any B.A. or M.A., on payment of the registration fee, may attend the classes in Honours free of charge.

Degree of LL.D.—This degree is honorary, and is awarded for literary, scientific, or professional distinction.

Subjects of Study.

Latin.—In the *Junior class*, three authors are taken, the kind and extent of matter for preparation being as thus exemplified, viz., an oration of Cicero, one book of the Æneid, and one book of Horace's Odes. In the *Senior class*, four authors, as, for example, a book of Livy, a book of the Annals of Tacitus, two of Juvenal's Satires, and one play.

Mathematics.—In the *Junior class*, *Algebra*, including quadratic equations, ratio, logarithms, and undetermined co-efficients; *Geometry*, Euclid, books ii., iii., and vi., with part of iv., Elementary Co-ordinate Geometry, and Elementary Principles of Trigonometry. *Senior Class*: *Algebra*—Of functions; nature of roots and factors; integral roots of an equation; evaluation of indeterminate expressions; the n^{th} term, and the sum of a series; principle of undetermined co-efficients; partial fractions; expansion of algebraical functions; reversion of series; exponential series; logarithmic series and theory of logarithms; expansion of trigonometrical and circular functions; expressions for π; Machins' formula; De Moivre's formula, &c.; general theory of equations. *Geometry*—Co-ordinate Geometry of lines of the first and second orders (conics); elementary co-ordinate Geometry of three dimensions; theory of limits. *Trigonometry*—Plane Trigonometry, with the simpler elements of spherical; Elements of Differential and Integral Calculus.

Physics.—Junior class: Lectures on Mechanics, Hydrostatics and Pneumatics, Heat, Electricity and Magnetism, Sound and Light, with experimental illustrations. *Books recommended*: Everett's "Text Book of Physics," Balfour Stewart, Ganot, Arnot. *Senior class*: Mechanics (Galbraith and Haughton); Hydrostatics (Galbraith and Haughton); Optics (Dupuis); Lockyer's Elementary Lessons in Astronomy

Mental and Moral Philosophy and Political Economy.—Junior class: This class meets six days a week, four of which are devoted to Metaphysics and Ethics, one to Logic, and one to Political Economy. The *text books* are Jevons' "Lessons in Logic," and Rogers' "Manual of Political Economy." In Metaphysics and Ethics no text book is used, but students are recommended to consult Ferrier's "Lectures on Greek Philosophy," or Schwegler's "History of Philosophy," in the composition of their weekly exercises. The lectures embrace a critical account of the main philosophical systems of ancient and modern times, and a systematic discussion of metaphysical and ethical problems. *Senior class*: This class meets four days a week, and deals with the higher problems of philosophy. Kant's "Critique of Practical Reason" (Abbott's translation) is recommended for reference. Students are required to give in fortnightly essays. *Private class*: This class is voluntary, and is devoted to the study of some classical author in philosophy.

Chemistry.—Junior class: The subjects of study in this class are: The leading elements with their more prominent compounds; Chemical system of weights and measures; Specific weight; Atomic weight; Gaseous volumes, &c.; Solution; Diffusion and Osmose. Heat in its more observable manifestations; Thermometry; Potential Heat; Conduction; Convection, &c. *Senior class*: The chemical elements more thoroughly studied; Chemistry of Carbon compounds; Chemical Philosophy; Crystallization; Principles of Crystallography; Heat in its phenomenal and dynamical relations; Theory of a Gas. Radiant energy; Its prominent laws; The Spectrum; The Spectroscope. In the Junior class the subject is studied more in its phenomenal relations; in the Senior class, more in its theoretic and fundamental relations. *Books for consultation*: Roscoe's "Elementary Chemistry," Fownes' "Chemistry, by Watts," Youmans' "Chemistry," Miller's "Chemistry," Remsen's "Theoretical Chemistry," Lockyer on "the Spectroscope."

Laboratory Work: The Laboratory may be attended for the first time during the Senior class. *Books for consultation*: Fownes' "Chemistry, by Watts;" Roscoe and Schorlemmer's "Chemistry;" Schorlemmer's "Chemistry of the Carbon Compounds;" Harcourt and Madan's "Practical Chemistry;" Fresenius' "Qualitative Analysis;" Thorpe's "Quantitative Chemical Analysis;" Wagner's "Chemical Technology."

Natural Science.—The lectures embrace an outline of the subjects of Botany, Zoology and Geology. No text book is used in this class, but the following works should be consulted: Gray's "Structural Botany,"

Bessey's "Botany," Packard's "Zoology," Dana's "Manual of Geology," Lyell's "Principles of Geology."

History.—Books recommended: Gladstone's "Juventus Mundi,' Curtius' "History of Greece," Grote's "History of Greece," Boeck's "Public Economy of the Athenians," Mommsen's "History of Rome," Guizot's "History of Modern Civilization," Stubbs' "Constitutional History of England," Hallam's and May's "History of the British Constitution," Sir James Stephen's "Lectures on the History of France," Taswell-Langmead's "English Constitutional History."

Rhetoric and English Literature.—Junior class: *Lectures*—I. On the Philology of the English Language; II. Composition. Students are required to give in fortnightly essays. *Books recommended*: Max Muller's "Science of Language," March's "Lectures on the English Language," Maetzner's "English Grammar," Earle's "Philology of English Language," Abbott and Seeley's "English Lessons for English People." *Senior Class*: I. Lectures on English Literature; II. Critical Reading of some Author. *Books recommended*: Craik's "English Literature," Taine's "English Literature," Dowden's "Shakespeare, his Mind and Art."

In the *French* and *German* classes the work is of the usual character.

Faculty of Law.

Matriculation.—The Junior Matriculation examination is the same as the Junior Matriculation in Arts. The Senior Matriculation examination is the same as the Senior Matriculation in Arts, with the addition of Taswell-Langmead's Constitutional History.

Degree of LL.B.—The course of study for students who have passed the Junior Matriculation examination extends over four sessions, and for students who have passed the Senior Matriculation over three sessions. Junior matriculants must take the following subjects: Junior Latin; senior Latin; junior Mathematics; junior Physics or Chemistry; junior French; senior French; junior Philosophy and Political Economy; English Literature; History; Roman Law and Constitutional Law and History; the Law of Real Property; Equity; Common Law; Criminal Law and Medical Jurisprudence; Commercial Law. Senior matriculants must take the following subjects: Senior Latin; junior Physics or Chemistry; senior French; junior Philosophy and Political Economy; English Literature; History; Roman Law and Constitutional Law and History; The Law of Real Property; Equity; Common Law: Criminal Law and Medical Jurisprudence; Commercial Law. The candidate for graduation must in each session pass an examination upon the subjects in Arts he has

studied, but he is not allowed to present himself for examination upon more than three of those subjects at one time, unless he has previously failed in some subject. He must also pass an examination in the last year of his course in all the Professional subjects prescribed.

Curriculum of Law Faculty.—The Legal studies for the degree of LL.B. extend over three sessions. Every candidate must have regularly attended the classes in Constitutional History, Criminal and Commercial Law, Common Law, Real Property Law and Equity during each year of his course; the class in Roman Law during his Second and Third years; and the class in Medical Jurisprudence during his Third year. Any graduate in Arts of Queen's University, who is also a Barrister-at-Law, will be admitted to the degree of LL.B. upon passing an examination to be prescribed by the Faculty.

The *course of instruction* embraces: Constitutional History, Criminal and Commercial Law, Roman Law, Medical Jurisprudence, Real Property, and Equity.

Graduates in Arts, being barristers-at-law, will be admitted to the *degree of LL.B.*, upon passing an examination on the following subjects: Taswell-Langmead's "English Constitutional History," May's "Constitutional History," Russell "On Crimes," Justinian's "Institutes" (Sanders' edition), Tomkins and Jencken's "Compendium of Roman Law," Wheaton's "International Law," Pollock "On Contracts," Underhill "On Torts," Dart's "Vendors and Purchasers," Snell's "Principles of Equity," Taylor's "Equity Jurisprudence," Maine's "Ancient Law." Candidates are required to send notice to the Registrar of their intention to attend this examination by the 20th day of March.

Faculty of Theology.

Matriculation and Pass examinations begin early in November.

Regulations for the Degree of Bachelor of Divinity.—I. Candidates for the degree of Bachelor of Divinity (B.D.), must be graduates in Arts of this University or of a university whose degrees are recognized for this purpose by the Senate. II. The degree shall not be conferred until the candidate has completed his theological curriculum, with a view to the Ministry in the Church to which he belongs, and has passed a satisfactory examination in the branches of Theology taught in this University. III. The subjects of examination shall be in two departments, the first embracing—(1) Hebrew and (2) the Evidences of Religion and the Inspiration of Scripure; and the second embracing—(1) Church History, (2) Biblical Criticism, and (3) Systematic Theology. IV. Candidates who have completed their Theological course may be examined in either of these departments, and

may defer their examination in the other department, provided there be not a greater interval than two years between their two examinations. V. Students who have completed all the sessions but one of their Theological course may be admitted to examination in the first department. VI. A candidate may, subject to the preceding regulations, appear at any University examination in Theology, provided he gives two weeks' notice of his intention to the Registrar. VII. When a student, who is a candidate for the degree, shall obtain at a pass examination on any subject two-thirds of the marks allotted to the subject, he may, on recommendation of the examiner, be exempted from further examination on that subject.

Fees.

The following fees are payable: Class fees on University Day (15th October); graduation fees before Convocation Day: The classes of Chemistry and Physics, each per session, 12 dols.; any other class, any number of sessions, 6 dols.; Registration and Library, per session 4 dols.; Apparatus, per session, 2 dols.; Matriculation examination, 1 dol.; Pass examination, 2 dols.; Graduation fee, Doctor of Science (D.Sc.), 50 dols.; Bachelor of Arts (B.A.), 10 dols.; Bachelor of Laws (LL.B.), 10 dols.; Doctor of Medicine (M.D.), 30 dols.; Master of Arts (M.A.), 20 dols.; Bachelor of Divinity (B.D.), 20 dols. Admission *ad eundem gradum*, B.A., 10 dols.; M.A., 20 dols.

Scholarships, Bursaries, and Prizes.

These are fairly numerous, and of substantial value. They are appropriated variously to junior and senior matriculants, and to undergraduates on sessional examinations. Certain scholarships and bursaries pertain to the Theological Department, and prizes are provided for special subjects. Scholarships in Arts have endowment nominations connected with them, securing exemption from class fees for one session, and thereby adding from 18 dols. to 24 dols. to the given value of each. A student, though not an undergraduate, is eligible for a scholarship; but certain scholarships can be held only by students having in view the ministry of a Presbyterian Church, being given by their founders upon that condition. Scholarships awarded upon matriculation examinations are tenable during the first session, and those awarded upon sessional examinations are tenable during the following session, except open scholarships, gained by students in the last year of their course in Arts, which are paid at once. Successful candidates for scholarships must make at least one-half the number of marks allotted to the subject or subjects upon which the scholarship is awarded.

VICTORIA UNIVERSITY, COBOURG, CANADA.

Faculty of Arts.

Matriculation Examination.—*Latin*: Translation into Latin prose; Translation from given Latin books; Grammar. *Greek*: Grammar; Translation from given Greek books; Grammar. *Mathematics*: Arithmetic; Algebra; through quadratic equations; Geometry—Euclid, i. and ii. *English*: Grammar, Composition, Literature (given books); English and Ancient Greek and Roman History; Geography, Ancient and Modern.

Students coming from other universities, and bringing letters of honourable dismission, are admitted *ad eundem statum*, after preliminary examination. The work on which such students receive standing, together with the work done subsequently, must be fully equivalent to what is ordinarily required at this University for the degree of B.A. Ladies are admitted to all the privileges of the University on the same terms as gentlemen. In Faraday Hall, a new and spacious building, greatly improved facilities are now offered for the study of Science, and especially for instruction in Blow-pipe Analysis, Assaying, Crystallography, and Determinative Mineralogy.

Various *scholarships* and *prizes* are open to competition.

Degrees.—*Bachelor of Arts*: In order to proceed regularly to this degree, candidates are required—1. To pass the Matriculation examination. 2. To attend the daily instructions of the lecture room, unless under special circumstances, when a dispensation may be obtained from the Faculty. 3. To pursue their University studies regularly for a period of at least four years. 4. To pass satisfactory examinations in all the subjects of the prescribed course of study. Besides the ordinary daily, terminal, and occasional examinations conducted by the Professors, there will be a Primary examination at the end of the Sophomore year, and a final at the end of the Senior year. No student will be admitted to the Primary examination who has not passed all previous examinations; and no student will be admitted to the examination of the Junior year who has not passed in all the subjects of the Sophomore year. Students who fail at the regular examination, and again in the same subjects at the prescribed Supplementary examination, must attend a second course of lectures in those subjects in which they fail. 5. To maintain a good moral character. Dispensation from residence may, in peculiar cases, include the privilege of proceeding to B.A. on three examinations—the Matriculation, the Primary, and the Final; and the usual interval of two years between these examinations may, when it is found expedient, be shortened on application to the Faculty. The Primary examination

will embrace the subjects of the first two years, and the Final the subjects of the last two, as prescribed in the ordinary course for B.A. by four annual examinations. The fees are the same as in proceeding to B.A. by four annual examinations. In no case is a degree conferred by this University without the completion of the course of study prescribed. *Degree of Master of Arts*: Candidates for this degree must be Bachelors of Arts of at least three years' standing. Their attainments and moral character must be satisfactory to the Senate of the University. They must make application in writing to the President on or before the day specified in the Calendar.

Fees and Expenses.—Matriculation, 5 dols.; Tuition (per annum), 15 dols.; Non-residents (annual fee), 25 dols.; Incidentals, 10 dols.; Supplementary examination (for each paper), 2 dols.; Extra Supplemental, 4 dols.; Certificate of Standing, 2 dols.; Change of Faculty, 4 dols.; Degree of B.A., 10 dols.; Degree of M.A., 10 dols.; *ad eundem statum*, 3 dols.; *ad eundem gradum*, 10 dols. Rooms may be had in the College at a trifling rent. Students who lodge in the College may make arrangements in private families for their board; or board, with lodging, may be had at prices varying from 2 dols. to 3 dols. a week. The total expenses for tuition, board, and incidentals, varies from 120 dols. to 150 dols. per annum.

Scientific Department.

Matriculation.—I. *Mathematics*: Arithmetic; Algebra—Todhunter's, through the Binomial Theorem; (1) Geometry—Potts's Euclid, b. i.—vi.; (2) Plane Trigonometry, through the solution of Plane Triangles. II. *Natural Science:* Natural Philosophy—Haughton, or Peck's Ganot, or Hamblin Smith; Chemistry — Roscoe's Primer. III. *English*: (1) Grammar and Composition—Literature—a given book. IV. *History and Geography*: History of England—Short History of the English People—Green; Outlines of Canadian History; History of Greece and Rome—Schmitz; Geography—Physical and Political.

Degree of B.Sc.—On the successful completion of the course in Science, the degree of Bachelor in Science will be conferred by the Senate of the University. The Regulations concerning admission fees, and expenses for the Faculty of Arts, will apply in this department also. Graduates and undergraduates in Arts who proceed to the degree of B.Sc. are charged a fee of 5 dols. for enrolment in the Science Department, and a fee of 2 dols. a paper for all papers set after enrolment. No re-examinations are required on subjects passed in the Arts Course. There is a Special Course of summer lectures in Experimental Chemistry and in Crystallography (formal and applied),

and Determinative Mineralogy with blow-pipe anyalsis, intended to afford young and inexperienced professors, high school teachers, and others, who are unable to attend during the regular session, every facility for the study of methods of chemical experiments, and of the determination of minerals and projection of crystals. The fee for the two courses, the one in Experimental Chemistry, the other in Determinative Mineralogy and applied Crystallography, is 30 dols. each, in addition to charges for minerals used. Applicants desiring more explicit information on points that may particularly concern them are requested to communicate on the subject with the Professor of Chemistry and Physics, Faraday Hall, Victoria University, Cobourg, Ontario, Canada.

Faculty of Laws.

Degree of LL.B.—To obtain the degree of LL.B. it is necessary to pass the examinination for Matriculation and the four subsequent annual examinations. A graduate in the Faculty of Arts is exempt from subjects on which he has passed in the Arts course. A graduate in Arts of three years' standing, who has also been admitted a barrister by the Law Society of Ontario, is admitted to the degree of LL.B. on a final examination on the following works: 1. Kent's International Law, or Woolsey; 2. Hallam's Constitutional History of England; 3. Story's Conflict of Laws; 4. Mill's Representative Government; 5. Bentham's Theory of Legislation; 6. Lieber's Political Ethics. Any barrister, not a graduate in Arts, may be admitted to the degree of LL.B. on two examinations—a Primary on the first two years, and a Final on the last two years, of the course.

Degree of LL.D.—A graduate in both Arts and Law of this University may take the degree of LL.D. in course, in ten years after receiving that of M.A. or LL.B., on complying with the following regulations: I. Two years before proceeding to the degree he must pass an examination in the following works: (1) Commentaries, Gaius, books i.-iv; (2) Tacitus, Annals, book iv; (3) Aristotle's Politics, books i., ii.; (4) Plato's Republic, i., ii.; (5) Savigny's Private International Law; (6) Phillimore's International Law; (7) Austin's Jurisprudence, vol. i.; (8) Lecky's History of European Morals; (9) Hooker's Ecclesiastical Polity, book i. II. Eight months before proceeding to the degree he shall deliver to the President fifty copies of a printed thesis, containing at least thirty-two octavo pages, on a subject approved by the examiners. The thesis must give evidence of such literary and scientific attainments as shall justify the examiners in recommending the candidate for the degree. III. The fee for the examination shall be 10 dols., and for the degree 50 dols.

Fees.—Matriculation, 5 dols.; Annual examination, 5 dols.; Primary or Final, 10 dols.; Examination for LL.D., 10 dols.; degree of LL.B., 10 dols.; degree of LL.D., 50 dols.

Faculty of Theology.

Preliminary Studies. — Wesley's Sermons, i.—lii.; Wesley on Christian Perfection; Angus's Bible Handbook; Smith's New Testament History; Smith's Old Testament History; Elements of Hebrew.

Junior Year.—Theology: Apologetics—Bascom's Natural Theology, and Fisher's Beginnings of Christianity; Systematic Theology—Pope, vol. i.; Biblical Theology of the Old Testament—Oehler, pt. 1. *Exegesis*: New Testament—selected portions. *Works of reference*—Meyer and Godet on Luke, Meyer and Hackett on Acts, Winer's Grammar, and Cremer's Lexicon; Old Testament—the Pentateuch, selected portions. *Works of Reference*—Lange's Commentaries; Smith's Dictionary of the Bible, Articles on Pentateuch, Deuteronomy, Eden, Chronology, Noah, Moses, Passover, Law of Moses, Atonement; Green's Hebrew Grammar, and Fuerst's, Davies', or Gesenius' Lexicon. *History*: History of the Christian Church to the Reformation, Kurtz, vol. i.

Middle Year.—Theology: Systematic Theology—Pope, vols. ii. and iii.; Biblical Theology of the Old Testament—Oehler, part. ii.; of the New Testament—Van Oosterzee. *Exegesis*: New Testament. *Works of reference*—the Commentaries of Ellicott, Meyer, and Hackett. Old Testament: The Prophets. *Works of reference*—Lange and Alexander on Isaiah, and Wright and Henderson on Zechariah. *History*: History of the Reformation—Fisher; History of Methodism—Stevens, vols. i. and ii.

Senior Year.—Theology: History of Doctrine—Shedd, books i.—vi.; Comparative Theology—Winer, Confessions of Christendom; Biblical Theology—Oehler, part iii. *Exegesis*: New Testament. *Works of reference*: The Commentaries of Meyer, Beet, Philippi, and Delitzsch. Old Testament: The Poetical Books. *Works of reference*: Commentaries of Lange, Stuart, and Perowne. *Practical Theology*: Homiletics and Pastoral Theology (Blaikie); Church Polity; Lectures and the Discipline of the Methodist Church of Canada.

Degree of B.D.—Candidates for this degree must be graduates in Arts of at least one year's standing, and ministers or candidates for the Ministry in good standing in some branch of the Christian Church. They are required to give evidence of satisfactory acquaintance with the subjects assigned as preliminary studies. They are required to pass a satisfactory examination in all the subjects of the three years' course of study. Special facilities for this course are afforded to resident graduates in Arts. Theological students who are not graduates

but who have matriculated in Arts, may pursue a special course in Arts and Theology, for which a testimonium will be given; and students receiving such testimonium will be exempt from examination on the subjects embraced therein, when they subsequently proceed to the degrees of B.A. and B.D.

Candidates for the Ministry.—Probationers for the Ministry of the Methodist Church of Canada, who have been appointed to College, will pursue the course of study prescribed on page 192 of the Discipline of the Church. They will be examined at the close of each college year by the Committee appointed by the Annual Conferences. A very full and thorough course of instruction in elocution is available, at a low fee, to all Theological students. The Educational Society of the Methodist Church makes provision for free tuition, and aids in meeting the general expenses of young men appointed by the Conferences to attend College. The Lectures in Theology begin Oct. 1st and close April 15th. Examinations begin May 1st.

Preliminary Course of Study.—This course of study is designed to meet the wants of young men preparing to offer themselves to be received on trial for the Ministry. It embraces all the subjects prescribed for the preliminary and first year's examinations of the Methodist Conference, and may extend over one, two, or three years, according to the circumstances and previous attainments of the student. The Theological parts of this course may be pursued in connection with preparation for Matriculation in Arts. Students of this class will be admitted only on certificates from their quarterly meetings, by which alone they can be finally recommended for the work of the Ministry.

Scholarships, Bursaries, and Prizes are open for competition to Theological students under the regulations established by the Senate.

Fees and Expenses.—Conference Students, Tuition, free; Conference Students, Incidentals, 6 dols.; other Students, Tuition, 15 dols.; other Students, Incidentals, 6 dols.; single Courses of Lectures, 5 dols.; Annual Examination, 5 dols.; Supplementary Examination (each paper), 2 dols.; Degree of B.D., 10 dols.; total expenses for board, incidentals, and tuition, 120 dols. to 150 dols. For further information, apply to the Dean of the Faculty.

University of New Brunswick.

Classes of Students.—There are four Classes of students recognised by the Act establishing the University, viz.: (1) *Undergraduates*, who are regularly matriculated, and undertake the whole course of study required for the degree of A.B. This course extends over a period of

three years. (2) *Students in Special Undergraduate Courses*, who are matriculated, and pursue the studies necessary for the diploma in such special courses. (3) *Partial Students*, who are matriculated, and attend two or more courses of lectures. (4) *Occasional Students*, who, on application to the President, may be admitted to a particular course or courses of Lectures.

Admission.—Candidates for matriculation as *undergraduates* are required to present themselves for examination on or before the third Thursday in September, when the academical year commences. Intending candidates are required to forward their names to the President at least a week previous to the commencement. Candidates for matriculation as *students in any special undergraduate course* are required to pass examination in the same subjects as are prescribed for those entering the General Course, omitting the Greek and Latin. Candidates for matriculation as *partial students*, are required to pass such an examination as will prove that they are qualified to make satisfactory progress in the classes they may wish to join. Persons desirous of entering as *occasional students*, must apply for permission to the President, and procure from the Registrar tickets of admission to such lectures as they may desire to attend.

The *Matriculation examination* embraces: *Classics*—selected portions of two Greek authors, *e.g.*, four chapters of Xenophon and about 300 lines of Homer; and of three Latin authors, *e.g.*, Cæsar, Cicero (one oration), and Virgil (one book); with easy translation into Latin. Honour candidates are offered more advanced authors, with translation from books not prescribed. *Mathematics*—Arithmetic, including vulgar and decimal fractions; Algebra, to quadratic equations; and Geometry, first four books of Euclid, and first twelve chapters of Wormell's Modern Plane Geometry. Also *English Language* (composition) and *History and Geography*, including History of England and of Canada, and of Greece and Rome.

University Terms and Lectures.—There are three terms for academic exercises in each year: (1) First, or Michaelmas, term begins on the third Thursday in September, and ends on the 21st of December. (2) Second, or Lent, term begins on the 5th of January, and ends on the Thursday before Easter. (3) Third, or Easter, term begins on the Wednesday after Easter, and ends on or about the last Thursday in June.

IV. *Degrees.*—The degrees conferred by the University are those of Bachelor and Master in Arts, Bachelor of Science, Doctor of Philosophy, Bachelor and Doctor of Civil Law and Doctor of Laws.

Exercises and Examinations for Degrees.—Candidates for the *degree*

of B.A. are required to attend lectures and pass examinations on all the subjects of the ordinary Undergraduate Course, except in those cases in which the Faculty, in consideration of peculiar circumstances, shall dispense with attendance on lectures. Examinations are held in every department at the end of every term. Supplemental examinations are held at the beginning of every term for those who fail to pass the ordinary examinations. An examination, known as the University examination, is held at the close of the academic year on all the subjects of study prescribed in the ordinary course for each year. A Supplemental examination is held at the beginning of each academic year for those who fail in not more than two subjects at the University examination, the departments of Mathematics and Classics each counting as two subjects. Failure at this examination involves the loss of the previous academic year.

Examinations for Women.—1. Candidates will be admitted to a first examination, embracing the subjects of the Matriculation examination. French, however, may be substituted for Greek. 2. Candidates will be admitted to a further or second examination, embracing the subjects of the course for the Freshman year; but Hygiene and the rudiments of Vegetable and Animal Physiology and Morphology may be substituted for Greek. 3. Candidates on passing each of the above examinations will be entitled to a certificate bearing the seal of the University. 4. No candidate will be admitted to the first examination unless she has completed the fifteenth year of her age; nor to the second examination unless she has completed the sixteenth year of her age. 5. Every candidate who proposes to present herself at an examination must give notice of her intention to the Registrar of the University at least four weeks before the commencement of such examination; and each notice must be accompanied by a fee of 3 dols. 6. Both the first and second examinations will be held each year at the University, on the opening of the term in September. But should no fewer than four candidates have given timely notice of their wish to be examined at any other central locality in the Province, the Senate will endeavour to make such arrangements with the local trustees of schools, or others, as will enable them to hold a simultaneous examination in that locality.

The *Course of Study* embraces Classics, Mathematics, Natural Science, English Language and Literature, English Literature and Logic, Mental Philosophy and Political Economy, French, and History, and extends over three years.

Higher Degrees.—No one is admitted to the degree of *Master of Arts* (M.A.) until the expiration of two years from the date of the degree of

B.A.; nor until he has passed a satisfactory examination in the higher Mathematics and the Greek and Latin Languages. Nor to the degree of *Bachelor of Science* (Sc.B.) until six years from the degree of B.A., nor until he has passed a satisfactory examination in Chemistry, Mechanical Philosophy, and Natural Science. Nor to the degree of *Doctor of Philosophy* (Ph.D.), until five years from the degree of Sc.B.; nor until he has passed a satisfactory examination in General Physics and Mental Science. Nor to the degree of *Bachelor of Civil Law* (B.C.L.) until six years from the degree of B.A; nor until he has passed such examination and performed such exercises as may be prescribed by the President and the University examiner or lecturer in Civil Law. Nor to the degree of *Doctor of Civil Law* (D.C.L.), until five years from the degree of B.C.L.; nor until he has performed such exercises as may be prescribed by the President and the University examiner or lecturer in Civil Law. The degree of *Doctor of Laws* (LL.D.) is regarded as strictly honorary, and is conferred only on such persons as the Senate may consider worthy of the distinction. N.B.—Candidates for any degree must, on or before the first Monday in April, send to the President a written notice of their intention to present themselves for examination, stating the subjects on which they propose to be examined.

Medals, Prizes, and Scholarships include gold and silver medals for special proficiency, Exemptions from fees are granted to any one in needy circumstances on the production of required testimonials; and teachers are admitted to the classes free of charge. Besides a number of county scholarships, the following of 60 dols. each, and tenable for one year, are annually offered for competition among undergraduates who hold no other scholarship from the University: In the Freshman Year, one for proficiency in Classics; in the Junior Year, one for proficiency in English Language and Literature; in the Senior Year, one for proficiency in Mathematics. No candidate is awarded a scholarship in any department unless he has been placed in the first class in Honours in that department.

Fees.—Students are required to pay the following fees to the University: On Matriculation, 2 dols.; for Tuition (annually) 22 dols. 50 cents.

Board and Residence.—Students may reside either in College or in town boarding-houses approved by the Faculty. The annual average expenses of a student residing in College are as follows: Board for forty weeks, at 3 dols. per week, 120 dols.; tuition fees, 22 dols. 50 cents; text books (average), 9 dols.; subscription for library, 1 dol.; for plate, 50 cents; fuel and light, 13 dols.; washing, 8 dols.; gymnasium,

1 dol.—175 dols. Board may be obtained in town for 2 dols. 50 cents a week and upwards.

A Collegiate School, established in connection with the University, is specially designed to prepare students for entering college life. The inclusive charge is 200 dols. per annum.

King's College, Windsor, Nova Scotia.

Faculty of Arts.

Candidates for Arts degrees must pass the following *Matriculation examination*: (1) Classics; Greek and Latin, grammar and selected books, with prose composition; (2) Arithmetic; (3) Algebra—first four rules; (4) Euclid—first two books; (5) English Grammar; (6) English History; (7) Geography; (8) French or German.

Matriculation in Engineering, the same as in Arts, with the omission of the Classical subjects. Attendance at lectures is compulsory in all faculties.

Scholarships—Ten *Divinity*, of £30 annual value, each tenable during curriculum. One *exhibition* of £16 per annum, tenable during curriculum; One *Hebrew prize* of £9; the *Bishop's prize* of £20 in books; the *President's prize* of 30 dols.; the *General Williams prizes*, three of 60 dols. each; the *Akins Historical prize* of 30 dols.; three *Stevenson scholarships* of 80 dols. each, tenable for two years; the *Cogswell Cricket prize*—the interest of 400 dols; the *Almon Welsford Testimonial*—the interest of 400 dols.; the *McCawley scholarship*—interest of a fund (amount unstated by the college). Every student is required to undergo terminal examinations.

Responsions.—All Matriculated students must pass this examination. *Subjects*: Two Greek and two Latin books, Latin Prose Composition, English Literature, Divinity, Algebra to quadratics, inclusive, Logarithms, Euclid, one Modern Language.

B.A. Examination.—1. Classics: Greek and Latin—selected books; Historical Periods; Geography and Latin Composition (prose); 2. English Literature—selected works. 3. Divinity: Four Gospels—Bible History and Liturgy. 4. Mathematics: Algebra, Euclid, Trigonometry, and Conic Sections; 5. Natural Science: Analytical and Practical Chemistry; Geology and Mineralogy. 6. Modern Languages—any one.

School of Civil and Mining Engineering.

The course for degrees extends over three years, but under certain circumstances this period may be abridged to two, and even one year. The first University examination is identical in some respects with Responsions. The *subjects* are: English Literature, Mathematics, and

Physics. The Final examination is on—Engineering, Mensuration, Levelling and Mapping, Mathematical Physics, Applied Natural Philosophy, Chemistry, Geology, Mineralogy.

The Academical year begins in October, and contains three terms—Michaelmas, from beginning of October to beginning of December; Lent, from beginning of January to Saturday before Palm Sunday; Easter, from Monday after Easter Monday to last Thursday in June.

Fees, &c.—Board and attendance—thirty-three weeks at 3 dols. 20 cents.—105 dols. 60 cents.; room rent, three terms, 6 dols.; pew and road, 2 dols.; fuel and light, 33 dols.; library, 5 dols.—151 dols. 60 cents. Matriculation, 2 dols.; tuition—each professor per term, 4 dols.; degree of B.A., 12 dols.; degree of M.A., 12 dols.; any higher degree, 20 dols.

Terms, &c.—B.A.—twelve terms' standing, nine residence; B.E.—nine terms' residence, which may be reduced; M.A.—twenty terms' standing; B.C.L.—twenty terms' standing; D.C.L.—thirty-three terms' standing; B.D.—ten years' standing from time of taking first degree; D.D.—fourteen years' standing from time of taking first degree.

School of Practical Science, Province of Ontario.

The curriculum extends throughout three years. There are three departments: 1. Engineering; 2. Chemistry; 3. Assaying and Mining Geology.

Fees.—30 dols. for the first session; 40 dols. for the second; and 50 dols. for the third. These are payable in two instalments, one at the beginning of each term.

CHAPTER II.

UNIVERSITIES AND COLLEGES IN AUSTRALIA AND NEW ZEALAND.

University of Sydney; St. Paul's College; St. John's College; St. Andrew's College—University of Melbourne—University of New Zealand.

UNIVERSITY OF SYDNEY.

THERE are three Faculties—Arts, Law, and Medicine. In Arts, the degrees granted are those of Bachelor and Master; in Law, those of Bachelor and Doctor.

The academic year consists of three terms—Trinity term, from June to August inclusive; Michaelmas term, from October to December inclusive; Lent term, from March to May inclusive.

Matriculation.—The Matriculation examination takes place in the early part of Trinity term; it is conducted by means of written or printed papers, and at the examiners' discretion by *vivâ voce* questions. The *subjects* are: Greek—selected books; Latin—selected books; English—Grammar and Composition; Elementary Chemistry, Physics, or Geology; Arithmetic; Algebra, to simple equations inclusive; Euclid, book i. The above are the *Pass* subjects. For Honours the examination is of a more extended character. Any candidate for matriculation may, by applying to the examiners, be exempted from examination in Greek.

Candidates for degrees during their first year attend the University lectures on the following subjects: 1. Greek Language and Literature; 2. Latin Language and Literature; 3. Mathematics; 4. Experimental Physics. And during their *second year*, lectures on: 1. Greek Language and Literature; 2. Latin Language and Literature; 3. Mathematics; 4. Natural Philosophy; 5. Chemistry; 6. Geology. Candidates for the B.A. degree during their *third year* attend lectures on two of the undermentioned divisions: 1. Classical—Greek and

Latin Languages—Ancient History. 2. Mathematical—Mathematics and Natural Philosophy; 3. Natural Science—Chemistry, Experimental Physics, Practical Chemistry and Geology.

If a candidate satisfy the authorities that his abilities and attainments are such as to enable him to keep up with the usual course of study at the University without attendance upon lectures, *exemption from such attendance* may be granted him for a period not exceeding one year at any one time.

Admission ad Eundem Gradum.—Graduates of other universities approved by the Senate may be admitted *ad eundem gradum* without examination.

Colleges.

By Act of Parliament provision is made for the foundation of Colleges within the University in connection with the various religious denominations, in which students of the University may enjoy the advantages of residence, instruction in the doctrine and discipline of their respective Churches, and tuition supplementary to the lectures of the public professors.

No student can be admitted to any such College unless he immediately matriculates in the University, submits to its discipline, and attends the statutable lectures; nor can he continue a member of the College longer than his name remains upon the University books.

ST. PAUL'S COLLEGE (*Anglican*).—In addition to the several *University scholarships*, which are open alike to all members of the University, two *scholarships*, of the value of £25 each per annum, are given by the Lay Fellows, intended for resident students desirous of taking Holy Orders, and are tenable for three years. There is also an annual scholarship, called the *Edward Aspinall scholarship*, of the value of £25, open to students of the second year, tenable by either a resident or non-resident student; and another called the *Kemp scholarship*, value about £20 per annum, tenable for one year by the best matriculant entering the College in June.

ST. JOHN'S COLLEGE (*Roman Catholic*).—This institution bestows one *scholarship* of £50 for the maintenance and education of an ecclesiastical student; one of £50, open to newly matriculated students; and one of £50, open to resident and non-resident students who have passed the first year's examination in the First or Second Class.

ST. ANDREW'S COLLEGE (*Presbyterian*).—*Scholarships*: One of £50, tenable for one year; one of £50, tenable for three years; one of £50, tenable for three years, open to students for the Ministry; and one of £50, open to students from any of the public schools in Illawarra.

University Scholarships and Prizes.—Wentworth Travelling fellow-

ship, for a graduate in Arts, tenable three years, interest of £916; *scholarships* of £50 each, for one year, in Natural Science, Mathematics, Chemistry, and Experimental Physics, and Classical Literature; of £25, for a candidate for the degree of LL.D.; of £100, for three years, for a graduate in Arts qualified by residence; of £50, for three years, in general proficiency; of £25, for two years, in Theoretical and Practical Chemistry; of £50 for ecclesiastical students; *cadetship* in the Royal Military College, for a graduate; a grammar school *exhibition* of £25 for three years; Government Training School *exhibitions*, £30, £40, £50, for three years; eight *bursaries* of £50, one of £25, for three years, with exemptions from fees, for graduates in Arts; one of £50 for sons of Ministers of religion; one of £50 for a student unable to pay the college pension; *medals* in special subjects; *prizes* of £20 and £10 for distinctions in examination for women; of £5 in special subjects at the college examination.

Fees.—Matriculation, £2; undergraduates exempted from attendance on lectures, when presenting themselves for yearly examination, £2; for B.A. degree, £3; for M.A. degree, £3; for LL.B. degree, £10; for LL.D. degree, £10 (if not a B.A. in ordinary course there is an extra fee of £2); for admission *ad eundem gradum*, £5 5s.; for entering name on books, £2; Matriculation, £2. *Lecture fees*: Classics, £2 2s; Mathematics, Natural Philosophy, £2 2s.; Chemistry, £3 3s.; Experimental Physics, £3 3s.

Appointments in the Civil Service.—Examinations for this purpose are held in rudimentary education.

Admission to the Profession of Solicitor.—Examinations for this purpose are similar to those of the United Kingdom, and under like conditions. Preliminary examinations for Articled Clerks are held in March, July, and October; the subjects are the same as for the Matriculation examination. The clerk must be articled for five years, or, if a graduate, for three years, and he must pass two Intermediate examinations in History and Law respectively.

Admission to the Bar.—Two undergraduate years excuses from examination in Classics and Mathematics, to which, however, other candidates are subject. Latin Classics and Logic, or Latin Classics, and the French Language and Literature, go to dispense with Greek. History includes Hallam's Constitutional History and selections from Middle Ages, Creasy on the Constitution, and Stephen's Commentaries (introduction and concluding chapter). *Yearly examinations* are held in the subjects of the undergraduate course upon which lectures have been given during the year. Undergraduates of other universities may be admitted *ad eundem statum*.

Bachelor of Arts.—The examination for this degree takes place once a year at the beginning of Trinity term. No candidate can be admitted unless he be of nine terms' standing, and has passed all the examinations required since his admission to the University. The *examination* is both written and oral. Every candidate must pass in two at least of the undermentioned divisions: (1) Classical—Greek and Latin languages, Ancient History; (2) Mathematical—Mathematics, and Natural Philosophy; (3) Natural Science—Chemistry, Experimental Physics, Practical Chemistry, and Geology. Special papers are set for *Honours* in each of these divisions.

Master of Arts.—There is a yearly examination for this degree. Every candidate must have previously obtained the degree of B.A., and two years must have elapsed since the time of his examination for such degree. Candidates must elect to be examined in one or more of the following branches of knowledge: (1) Classical Philology and History; (2) Mathematics and Natural Philosophy; (3) Logic, Moral, Mental, Natural Philosophy; Natural Science. The Senate may at its discretion admit to examination for the degree of Master of Arts any person who shall have obtained, at least two years previously, the degree of Bachelor of Arts, or equivalent first degree in Arts in any other University approved by the Senate. *Scholarships* are awarded after examination as the Senate may from time to time appoint.

Bachelor of Laws.—Every candidate must have taken the degree of B.A., or some equivalent degree, at least one year previously in this or some other university approved by the Senate. The subjects of examination are—(1) Roman, Civil, and International Law; (2) Constitutional History and Constitutional Law of England; (3) General Law of England.

Doctor of Laws.—This degree is not conferred until after the expiration of two years from the granting of the LL.B. degree. Every candidate is required to pass an examination in the Civil Law in the original Latin, with especial reference to such particular works as the examiners may from time to time determine. The Senate has power to admit to examination for the degree of LL.D. any person who shall have obtained, at least two years previously, the degree of LL.B. at any other university approved by the Senate, and who shall have completed his twenty-seventh year, and shall also have obtained the degree of Bachelor of Arts, or an equivalent first degree in Arts, at any such university, as shall pass an examination similar to that prescribed for the degree of Bachelor of Arts in this University.

Examination in Law.—1. *Roman Law*: The Institutes of Justinian; Mann's Ancient Law. 2. *Constitutional Law*: Hearn's Government of

England, the Acts in force in New South Wales relating to the following subjects: Constitution, Electoral Matters, Governor, Parliament, Crown remedies and liabilities, Municipal Corporations. 3. *International Law*: The Laws of Allegiance, of Aliens, of Naturalisation, of Extradition; the rights and duties of Nations in times of Peace and in times of War; the Principles of Private International and Intercolonial Law.

University of Melbourne.

The academical year is divided into three terms—namely, the February term, commencing on the 9th Monday in the year and ending on the Saturday before the 23rd Monday; the July term, commencing on the 26th Monday and ending on the Saturday before the 34th Monday; the October term, commencing on the 36th Monday and ending on the Saturday before the 49th Monday. No person can be permitted to matriculate under the age of fifteen. Bachelors of Arts of not less than two years' standing and Bachelors of Laws of not less than three years' may be admitted to the degrees of Master of Arts and Doctor of Laws. Students of any college affiliated to the University may be allowed credit for attendance on such of the courses of lectures in that college as shall be recognised in the Statute of Affiliation. Graduates of recognised universities are admitted *ad eundem gradum*.

Fees.—Matriculation, 10s.; for each subject of examination selected by the candidate at any such examination, 5s.; for attendance on any number of courses of lectures, except as hereinafter provided, and for examination in the subjects thereof within six months from the conclusion of the course—for each course, £3; for attendance upon any course of lectures by any lecturer in Law or Engineering, and for examination in the subjects thereof within six months from the conclusion of the course, £12; for each year for the degree of LL.B., £24; for examination for the degree of LL.D., £12; fee payable by non-matriculated students for any attendance on lectures, or for any examination other than the matriculation examination—the fee payable in the like case by matriculated students, with the addition of one-fourth. *For certificates and degrees*: For certificate of any examination prescribed for matriculation or for the completion of any year, 2s. 6d.; for any other certificate of examination, with or without attendance on lectures, 10s. 6d.; for certificate of Engineering, £5; for degree of Bachelor of Arts, £5; for degree of Master of Arts, £10; for degree of Bachelor of Laws, £5; for degree of Doctor of Laws, £10; for degree of Bachelor of Music, £5; for degree of Doctor of Music, £10; for graduates of other Universities admitted to the same degree in the University of Melbourne, £5 5s.; for undergraduates of

other Universities admitted to the same standing in the University of Melbourne, £3 3s.

The *subjects* of the *Matriculation examination* are: Greek, Latin, English, French, German, Arithmetic, Algebra, Euclid, History, Geography. Candidates must pass in six of these subjects.

Candidates for the degree of *Bachelor of Arts* shall, subsequently to their matriculation, pass three examinations and complete three years.

The subjects of the *First examination* are: Junior or Senior Greek, Junior or Senior Latin, Lower Mathematics, Upper Mathematics, Chemistry, Mineralogy, Botany, Deductive Logic, Ancient History. Candidates who at the First examination shall have passed in Greek and Latin and in three other subjects shall thereby complete their first year.

The subjects of the *Second examination* are: Junior Greek or Senior Greek, Junior Latin or Senior Latin, English Language and Literature, Advanced Mathematics, Elementary Natural Philosophy, Comparative Anatomy and Zoology, History of the British Empire (part i.) Candidates who at the Second examination pass in any five subjects thereby complete their second year.

The subjects of the *Third examination* are: Senior Greek, Senior Latin, Advanced Mathematics, Mixed Mathematics, Advanced Natural Philosophy, Geology, and Palæontology, History of the British Empire (part ii.), Political Economy, Inductive Logic. Candidates who pass in any four subjects thereby complete their third year, and may be admitted to the degree of Bachelor of Arts.

Bachelors of Laws may present themselves for the Third examination for the degree of Bachelor of Arts in any two subjects prescribed for that examination other than the subjects passed by them in the course for the degree of Bachelor of Laws, and after passing in these subjects may be admitted to the degree of Bachelor of Arts.

The subjects of examination for the degree of *Master of Arts* are divided into *four schools*: (1) Language and Logic; (2) Mathematics and Physics; (3) Natural Science; (4) History and Political Economy; in any one of which a candidate may pass. Candidates must be Bachelors of Arts of at least one year's standing.

Candidates for the degree of *Bachelor of Laws* must, subsequently to their matriculation, pass four examinations and complete four years.

The subjects of the *First examination* are: Junior Greek or Senior Greek, Junior Latin or Senior Latin, Lower Mathematics, Upper Mathematics, Ancient History, Deductive Logic. Candidates who pass in Greek and Latin and in two other subjects thereby complete their first year.

The subjects of the *Second examination* are: Jurisprudence, English Language and Literature, History of the British Empire (part i.), Political Economy, Inductive Logic. Candidates who pass in Jurisprudence and three other subjects thereby complete their second year.

The subjects of the *Third examination* are: Roman Law, Constitutional Law, the Law of Property, Law of Obligations.

The subjects of the *Fourth examination* are: International Law, the Law of Wrongs (Civil and Criminal), the Law of Procedure.

Candidates who pass these several examinations may be admitted to the degree of Bachelor of Laws. Bachelors of Arts candidates for the degree of Bachelor of Laws are taken to have completed their first two years of the course for the degree of Bachelor of Laws, but Jurisprudence must form one of the subjects of the Third examination in addition to the subjects prescribed.

The subjects of examination for the degree of *Doctor of Laws* are: Roman Law, Jurisprudence, the Principles of Legislation. Candidates must be Bachelors of Laws of at least two years' standing.

Candidates for the certificate of *Engineer* must, after matriculation, pass three examinations and complete three years. The subjects of the *First examination* are: Lower Mathematics, Chemistry and Mineralogy, Practical Mensuration, Surface and Mining Surveying and Levelling, Drawing and Mapping. Candidates who pass in these subjects thereby complete their first year. The subjects of the *Second examination* are: Elementary Natural Philosophy, Geology, excluding Palæontology, Practical Chemistry, Advanced Surveying, Mechanical Drawing and Descriptive Geometry, Upper Mathematics *or* Advanced Mathematics. Candidates who pass in these subjects thereby complete their second year. The subjects of the *Third examination* are: Group 1. Advanced Natural Philosophy, Applied Mechanics, the Law of Contracts; Group 2. Metallurgy, Mining, Mining Law; Group 3. Civil Engineering, including Architecture. Candidates must produce evidence of having been engaged during twelve months in acquiring and of having acquired a practical knowledge of mining under a mining manager or of civil engineering under an engineer in charge of works. Candidates who pass in the first of the above-mentioned groups and in either the second or the third, and who produce the certificate mentioned above, have completed their third year. The certificate of Engineer specifies the branch of Engineering for which it is granted. Candidates who have obtained the certificate in either branch may, on passing in the subjects of the special third year group (either 2 or 3) prescribed for the other branch, receive the certificate for that branch.

Attendance on lectures is compulsory.

Honours examinations are held in all the subjects of study.

Scholarships.—A sum not exceeding £36 is annually devoted to the purchase of prizes of books. There are three exhibitions of £25 each and twelve of £30; and eight scholarships each of £45 a year, tenable for two years. The *Shakespeare scholarship* is of the value of £50 a year, tenable for three years; it is open to all Bachelors of Arts of not more than six terms' standing from the date of their Final examination. The examination is in connection with the works of Shakespeare. The *Engineering scholarship* is of the value of £45 per annum, tenable for two years. The *Stawell exhibition* is of the value of £30 per annum, tenable for two years. The *Bowen prize* consists of a medal or books, as the Council may from time to time direct. The *Dwight prizes* are of the value (about) of £25 a year each.

There is an examination in the subjects of Law from time to time prescribed by the Governor in Council for candidates for admission to the Professional division of the Civil Service in the Departments of the Law Officers of the Crown.

University of New Zealand.

All graduates of the Home or Australian Universities may be admitted to *ad eundem* degrees.

Scholarships, &c.—There are scholarships of two kinds—Junior and Senior—of the annual value of £45 and £60 respectively; their number is fixed annually by the Senate. Junior scholarships are open to persons between the ages of sixteen and twenty-one.

The *subjects of the Matriculation examination* are: Latin, English, Arithmetic, and three of the following: Greek, French, German, Italian, Algebra, Euclid, History, Geography, Elementary Chemistry, Elementary Physics, Elementary Natural Science.

There are educational institutions affiliated to the University at certain centres throughout the island, and candidates for degrees must attend the annual examinations of some one such body; residence is not compulsory, nor is attendance on lectures if the candidate can show that he is unable by reason of his occupation to avail himself of the advantages they offer.

For the degree of *B.A.* a curriculum of three years is required. The *subjects of examination* are: 1. Greek Language and Literature; 2. Latin Language and Literature; 3. English Language and Literature; 4. Modern Languages and Literature; 5. General History and Political Economy; 6. Jurisprudence and Constitutional History; 7. Mathematics; 8. Physical Science, to include (*a*) Heat and Radiant

Heat, and (*b*) Sound and Light, or, at the option of the candidate, Electricity and Magnetism; 9. Chemistry; 10. Natural Science, any one of the following branches—(*a*) [Geology and Mineralogy, (*b*) Zoology, (*c*) Anatomy and Physiology, (*d*) Botany, 11. Mental Science. Five of the above subjects must be passed in, including Latin and Mathematics.

Candidates for the *M.A.* degree must have taken the Bachelorship at least one year previously. The subjects are: 1. Languages and Literature, any two of the following sub-divisions: (*a*) Greek, (*b*) Latin, (*c*) English, (*d*) two modern languages other than English. 2. Political Science, including General History, Political Economy, Jurisprudence, and Constitutional History. 3. Mathematics and Mathematical Physics. 4. Chemistry and Experimental Physics. 5. Natural Science. 6. Mental Science.

Degrees in Law.—The curriculum for the degree of *Bachelor of Laws* is of four years' duration. Candidates must pass three University examinations, one at the end of their second or any subsequent year, the subjects of which are: 1. Roman Law; 2. English Law on (*a*) Personal Rights, (*b*) Rights of Property, (*c*) Rights in Private Relations. The *third examination* at the end of the fourth or any subsequent year embraces: (1) International Law; (2) English Law on (*a*) Public Rights, (*b*) Wrongs (Civil and Criminal). In the event of a candidate being a graduate in Arts of the University, either by examination or *ad eundem*, the curriculum may be dispensed with, and the degree granted on the examination being passed.

The *subjects of examination* for the *Doctorate of Laws* are: 1. Roman Law; 2. Jurisprudence; 3. The Principles of Legislation. No candidate can be admitted to the LL.D. examination until the examination of the second year following that in which he has passed for the degree of LL.B.

Degrees in Music.—A candidate for the degree of *Bachelor of Music* must declare at the time of matriculation his intention of proceeding to that degree, and must also produce evidence that he has been studying or practising Music, whether in New Zealand or elsewhere, for four years. A Bachelor of Music wishing to proceed to the degree of Doctor must produce a similar certificate for five years from admission to his present degree. Candidates for the degree of B. Mus. are required to pass an examination in each year in Music only. To obviate difficulties arising from difference of opinion amongst Masters in Harmony, the examiners will accept as correct all answers given in accordance with any standard work on Harmony. The books recommended for study are: Sir Frederick Ouseley's "Harmony, Canon, and

Fugue;" Albrechtberger's "Guide to Composition" (vols. ii. and iii. of the entire work) for "Counterpoint, Canon, and Fugue;" and Cherubini for the same. The Mus. B. Final examination is conducted in writing. A Bachelor of Music wishing to proceed to the degree of Doctor must pass an examination conducted in writing. A student who has taken his degree in Arts in the University may proceed to a Mus. B. degree, though he may not have declared his intention at the time of his matriculation.

Fees.—For the Matriculation or any other examination, £1 1s.; for certificates of any examination for the degree of B.A., LL.B., or LL.D., 5s; for the degree of B.A., £2 2s.; for the degree of M.A., £5 5s.; for the degree of LL.B., £5 5s.; for the degree of LL.D., £10 10s.; for degree of B. Mus., £5 5s.; for degree of D. Mus., £10 10s.; for graduates of other universities admitted to the same degree, in the University of New Zealand, £1 1s; for undergraduates of other universities, admitted to the same standing in the University of New Zealand, £1 1s.

CHAPTER III.

UNIVERSITIES IN INDIA.

University of Bombay—University of Madras—University of Calcutta.

UNIVERSITY OF BOMBAY.

THERE are two terms in each year. Terms must be kept by attending for a prescribed number of days at one or more of the institutions or colleges recognised by the University. For the first term ninety days attendance is prescribed; and for the second term, in the Faculties of Arts and Engineering, eighty days. But if an undergraduate has after his matriculation attended sixty days during that same term in which he has matriculated, he will be held to have kept that term.

Faculty of Arts.

Candidates for the *Matriculation examination* must be sixteen years of age. The *subjects* are: (1) English. (2) One of the following: Sanskrit, Greek, Latin, Hebrew, Arabic, Portuguese, Marothi, Gujarati, Canarese, Hindustani, Persian, Sindhi. This list is liable to alteration. No information as to particular books is given beforehand. (3) Arithmetic. (4) Algebra, to simple equations inclusive. (5) First four books of Euclid with deductions. (6) Elementary History and Geography. (7) Elementary knowledge of (*a*) the Mechanical powers; (*b*) the Laws of Chemical Combination; the Chemistry of Air, Land, and Water and the Phenomena of Combustion; (*c*) the Colour System.

Candidates having matriculated, will be required to pass the *First examination in Arts*. The *subjects* are: (1) Languages—Native and Classical; (2) Mathematics—Algebra, Euclid and Plane Trigonometry; (3) Logic; (4) History—Ancient and Modern; (5) (*a*) Analytical Geometry, *or* (*b*) Chemistry, Heat, and Electricity, *or* (*c*) some other subject fixed by the authorities beforehand.

The *Final examination* for the *Bachelorship* includes: (1) Languages. (2) Mathematics and Natural Philosophy. (3) Three of the following,

at the candidate's choice: (*a*) History; (*b*) Logic and Moral Philosophy; (*c*) Political Economy; (*d*) Dynamics and Hydrostatics; (*e*) Optics and Astronomy; (*f*) Analytical Geometry of two dimensions; (*g*) Chemistry, Heat and Electricity; (*h*) Physiology, Vegetable and Animal.

The *curriculum* is of three years' duration.

Fees.—Matriculation 5 Rs.; First University, 10 Rs.; Final B.A., 20 Rs.

For the degree of *M.A.* there is an *examination* comprising: Languages, History, Philosophy, Mathematics, Natural Philosophy, Natural Sciences. Candidates must be Bachelors of Arts of Bombay University and must be of two years' standing from the date of taking their degrees. The fee is 50 Rs.

Faculty of Law.

The degree of *Bachelor* is granted to Bachelors of Arts only of two years' standing. Such candidates may have graduated at Bombay or at some other university recognised by it. Lectures on Law must have been attended for at least three years. The fee is 25 Rs. The *subjects of examination* are: (1) Jurisprudence, and the Roman Civil Law; (2) Personal and Property Law, including the Hindu and Mahommedan Laws of Family and Succession, and the Indian Succession Act of 1865, &c.; (3) Contracts, Torts, and the Penal Code; (4) the Codes of Civil and Criminal Procedure, and the Law of Evidence.

Civil Engineering.

There are two examinations for the *Licence in Civil Engineering.* Candidates for the *First examination* must be matriculated and have kept four terms in a school or College of Civil Engineering recognised by the University of Bombay. The fee is 5 Rs. The *subjects* are: Arithmetic, Algebra, Euclid, Plane Trigonometry, Conic Sections, Analytical Geometry, Mathematical Physics, Experimental and Natural Science, Engineering, Engineering Drawing, &c.

The *Final examination* embraces: Mathematics, Applied Mathematics, Experimental and Natural Science, Architecture, Engineering, Engineering Drawing.

The degree of *Master* is granted only to Bachelors of Arts of Bombay or some university recognised by it. The fee is 50 Rs. The examination has reference to the candidate's practical work during the two preceding years.

Scholarships, &c.

Amongst these are: (1) *Munguldass Nathoobhoy's Travelling fellowship.* This is open to all graduates of Bombay University being Hindus who shall not be of more than five years' standing from the

date of their graduation. The fellowship is tenable for three years. The value of the fellowship is the interest on 20,000 Rs. (2) The *Manockjee Limjee gold medal* for composition. (3) The *Bhughwandass Purshotamdass Sanskrit scholarship*, value 400 Rs., tenable for one year. Candidates to be Bachelors of Arts. (4) The *Homejee Cursetjee prize* consists of books to the value of 200 Rs., awarded annually for the best English Poem by a student. (5) The *Jugonnath Sunkersett Sanskrit scholarships*—two, one of 25 Rs. and one of 20 Rs. per mensem, tenable for three years. (5) The *Jam Shri Vibhaji scholarship*, value 15 Rs. per mensem, tenable for two years by natives only. (6) The *Cowasjee Jehanghier Latin scholarship*, value 200 Rs. per annum. (7) The *Kinloch Forbes gold medal.* The interest of 5000 Rs. at 5 per cent., awarded for proficiency in General Jurisprudence and the Roman Civil Law. (8) The *David Sassoon Hebrew scholarship*, value 250 Rs. per annum, tenable two years. There are other rewards open to competition.

University of Madras.

The *Matriculation examination* embraces: (1) English. (2) One of the following languages: Sanskrit, Greek, Latin, Tamil, Teleegu, Kanarese, Malayalam, Singbolese, Hindustani. (3) History and Geography. (4) Algebra (elementary); Euclid (first three books); Arithmetic. *Fee* 5 Rs.

The *First examination in Arts* embraces: (1) English; (2) a Native or Classical Language; (3) History and Geography; (4) Arithmetic; (5) either Euclid (books i., ii., iii., iv., and vi.), and Algebra to quadratic equations inclusive, or Whateley's Logic. *Fee* 10 Rs.

The *Final examination* embraces: (1) English; (2) a Classical or Native Language; (3) English and General History; (4) Algebra; (5) Geometry; (6) Plane Trigonometry; (7) Moral Philosophy; (8) Natural Philosophy *or* Physical Science, *or* Logic and Mental Philosophy. *Fee* 25 Rs. The *curriculum* is of three years' duration.

The degree of *M.A.* is conferred on Bachelors of Arts only. The *examination* is in one of these branches of study, at the candidate's choice: (1) Languages; (2) Mathematics, and the Mathematical Sciences; (3) Natural Science; (4) Mental and Moral Science, Political Economy, &c.

Candidates for the degree of *Bachelor of Laws* must have passed the First examination in Arts in one of the Indian Universities, and must be twenty years of age. The *fee* for examination is 25 Rs. The examination embraces: The Law of Evidence, Law of Contracts, Law of Torts, Equity, Jurisprudence, Hindu Law, Mahometan Law, Criminal Law, Procedure, General Jurisprudence.

The degree of *Master of Laws* is obtainable only by Bachelors in the lower Faculty. The *fee* is 50 Rs. There is a further examination to be passed.

Bachelor of Civil Engineering.—Candidates must have passed the First examination in Arts in some Indian University, and must be of one year's standing from the date of having done so. The *fee* is 25 Rs. The *subjects of examination* are: Mathematics, Natural Philosophy, Mensuration and Estimate-making, and one of the following two groups: (*a*) Surveying and Levelling, Constructive Engineering, Architectural and Topographical Drawing; (*b*) Mechanical Engineering, Machine Drawing.

University of Calcutta.

Faculty of Arts.

Entrance Examination.—Every candidate must be fifteen years of age. The fee is 10 Rs. The examination is written. The *subjects* of examination are: (1) Languages—English and one of the following: Greek, Latin, Arabic, Persian, Hebrew, Sanskrit, Bengali, Oorya, Hindi, Urdee, Burmese, Armenian. (2) History and Geography. (3) Arithmetic, Elementary Algebra, first four books of Euclid, Mensuration.

First Examination in Arts.—Candidates must be of two years' standing from the date of passing the Entrance examination. The *fee* is 20 Rs. The *subjects* are: (i.) Languages; (ii.) History; (iii.) Mathematics, Pure and Mixed; (iv.) Logic; (v.) One of the following, to be selected by the candidate—(*a*) Psychology, (*b*) the Chemistry of the Metalloids.

The *Final examination* embraces one of the two following courses marked A. and B.: A. (1) Languages. (2) Mixed Mathematics. (3) Two of the following three subjects marked (*a*), (*b*), (*c*), to be selected by the candidate: (*a*) Mental Philosophy (Hamilton's Lectures), Moral Philosophy as in Fleming, *or* Butler's Analogy, part i., Dissertation on Virtue, Sermons i. ii. iii., *or* Logic as in Fowler's Inductive Logic. (*b*) History of England, Student's Hume; History of India during the Hindu, Mahometan, and British Periods, down to 1835, *and* Arnold's Lectures on Modern History, *or* Mill on Representative Government, *or* the History of the Jews from the beginning of the Monarchy to the Destruction of Jerusalem by Titus. The historical text books are fixed from time to time by the Syndicate. (*c*) Algebra, Plane Trigonometry, Analytical Conic Sections. B. English, Mathematics, as in A course, Inorganic Chemistry, Physical Geography, and one of the following to be selected by the candidate—(*d*) Acoustics, Thermotics,

Optics, Magnetism, Electricity, as in Ganot; (*e*) General Physiology, Animal Physiylogy, Zoology; (*f*) General Physiology, Vegetable Physiology, Botany; (*g*) Geology, Mineralogy, Palæontology.

The degree of *M.A.* is awarded to Bachelors of Arts who have obtained Honours without further examination or fee. Any Bachelor of Arts may by passing an *examination* in one of the five following branches, and on payment of a fee of 50 Rs., be admitted to the degree of Master of Arts: 1. Languages; 2. History; 3. Mental and Moral Philosophy; 4. Mathematics, Pure and Mixed; 5. Natural and Physical Science.

Faculty of Law.

Bachelor in Law.—Candidates for this degree must be graduates of the University in another faculty. The *fee* is 30 Rs. The *subjects of examination* are: The Principles of Jurisprudence; the Theory and Law of Property; the Law relating to Persons in their Public and Private Capacities; the History and Constitution of the Courts of Law and Legislative Authorities in India; the Land Tenures of Bengal and the Revenue Laws; the Law of Mortgage—Registration, Limitation, and Prescription; the Hindu and Mahometan Law in general use and application, as modified by the Acts and Regulations of the Bengal Code; the Law of Contracts and Torts; the Principles of Judicial Enquiries in Matters of Fact, and the Rules of Evidence in Use in the Mofussil Courts; Criminal Law, and Criminal and Civil Procedure.

Honours may be taken by passing an examination in: (*a*) General Jurisprudence, (*b*) Hindu Law, Mahomedan Law, the Law of Mortgage, the Law of Succession to the Property of Deceased Persons, the Law of Limitation and Prescription, the Law relating to the Purchase and Sale of Immoveable Property, including Sales for Arrears of Rent and Revenue, the Law of Tenure of Immoveable Property. Excepting *a* and *b*, the subjects are considered only in their relation to Indian Procedure. Candidates for Honours must pay a *fee* of 100 Rs. A candidate who has passed the Honours examination may receive the degree of Doctor in Law, provided that "Two members of the Faculty of Law or two Doctors in Law shall testify to the satisfaction of the Syndicate that since graduating he has practised his profession with repute for five years, and that in habits and character he is a fit and proper person for the degree of Doctor; *and* he shall produce an essay, approved by the President of the Faculty of Law for the time being, on some subject connected with Law or Jurisprudence.

Civil Engineering.

The *Licence in Civil Engineering* is open to all undergraduates, pro-

vided they have prosecuted a regular course of study in a school of Engineering recognised by the Syndicate for three academical years after passing the Entrance examination. The fee is 25 Rs. The *subjects of the examination* are: (1) Mathematics, Algebra, Geometry, Plane Trigonometry and Mensuration; (2) Mechanical Philosophy—Statics, Dynamics, Hydrostatics, Hydro-dynamics, Optics. (3) Natural and Experimental Science—Chemistry, Heat, Mineralogy, Physical Geography. (4) Construction—Materials, Practice of Building, Earthwork, Construction of Roads, Construction of Railroads, the Practice of Bridge Building, Carpentry, Hydraulic Works, Strength of Materials, Stability of Structures, Mechanism, Designs; (5) Drawing; (6) Geodesy.

The degree of *Bachelor in Civil Engineering* is bestowed after examination on candidates who, subsequently to passing the Entrance examination, have for three years devoted themselves to the Engineering study at a school of Engineering recognised by the Syndicate. The *ee* is 30 Rs. The *subjects of examination* are the same as for the Licence. Any licentiate in Civil Engineering may on paying the usual fee be admitted to the degree of Bachelor in Civil Engineering without further examination.

Bachelors of Civil Engineering may be admitted to the degree of *Master* by passing the Honours examination, the subjects of which are Mathematics, Mechanical Philosophy, Natural and Experimental Science, Construction, Geodesy. The *fee* for the degree of Master is 100 Rs.

Scholarships, &c.

There are five *studentships*, each of the value of 2,000 Rs. a year each. Any M.A. of the University is eligible for one of these studentships during eight years from the time that he has passed the Entrance examination. Each studentship is tenable five years. The examination is held in *five* of the following subjects: (1) English, (2) Latin, (3) Greek, (4) Sanskrit, (5) Arabic, (6) History of Greece, Rome, England, and India, and a General View of the History of Modern Europe, from Guizot, Hallam, &c., to include Political Economy; (7) Moral Sciences, viz., Ethics, Mental Philosophy, Logic; (8) Pure Mathematics; (9) Mixed Mathematics; (10) Physical Science. Four *Duff scholarships*, each of the value of 15 Rs. a month, tenable for one year. The *Eshan scholarship*, value 600 Rs., to be paid to the student on his attaining the degree of M.A. The candidate must be a Hindu native.

Affiliated Institutions.

The institutions affiliated to the University are: Presidency College,

Hooghly College, Dacca College, Kishnagur College, Berhampore College; Doveton College, Calcutta; St. Paul's School, Darjeeling; Free Church Institution, Calcutta; La Martinière College, Calcutta; London Mission Society's Institution, Bhowanipore; Serampore College, Agra College, Benares College, Saugor High School, Sanskrit College, Bishop's College, Ajmere College, Bareilly College, Patna College, St. Xavier's College; St. John's College, Agra; Joynarains' College, Benares; Lahore Government College, Delhi Government College; St. Thomas College, Colombo; St. Stephen's College, Delhi; General Assembly Institution, Calcutta; Lahore Mission School; Cathedral Mission College, Calcutta; Victoria College, Agra; Church Mission School, Umritsur; Bishop Cotton's School, Simla; Christ Church School, Cawnpore; Canning College, Lucknow; La Martinière College, Lucknow; Mussoorie School; Allahabad School; Muir Central College, Allahabad; Cuttack College. The above are affiliated up to the B.A. standard.

Gowhatty High School, Calcutta; Meedrossa Pehore High School; Chittagong High School; St. Peter's College, Agra; London Mission School, Benares; London Mission School, Mirzapore; Metropolitan Institution Calcutta; Midnapore High School, Banlia High School, Jaipur Maharaja's College, Kandy Collegiate School, Patialah Moharajah's Schools; Wesleyan Central Institution, Batticaloa; Wesley College, Colombo; Residency College, Indore; Rumghur High School. The above are affiliated up to the First Arts standard.

Presidency College, Hooghly College, Dacca College, Kishnaghur College, Berhampore College, Patna College, Agra College, Cuttack College, Chittagong High School; Canning College, Lucknow; Muir Central College, Allahabad. The above are affiliated in Law.

The Medical College of Calcutta is affiliated in Medicine.

In Engineering are affiliated: Thomason College, Roorkee; Presidency College.

SECTION III.

THE CONTINENT OF EUROPE.

CHAPTER I.

NOTES ON THE CONTINENTAL UNIVERSITIES.

France — Austria-Hungary — Germany — Italy — Russia — Spain — Switzerland—the Netherlands—Finland—Turkey.

FRANCE.

COLLEGE OF FRANCE.—"The College of France is an establishment for superior instruction where the courses are public and gratuitous. It confers neither a diploma nor university title—that is to say, a degree."

The following is taken from the report of the U.S. Commissioner of Education:

The foundation of this great institution coincided with the extensive movement in the sixteenth century which placed the study of arts, sciences, and letters on a new basis. The University of Paris, which was still penetrated with the old scholastic spirit, and under the control of theologians, showed itself more than ever hostile to changes. It excluded Hebrew, Greek, and all other branches from which the partisans of the reform movement derived the spirit of criticism and free inquiry. The University was, therefore, opposed to the college created by Francois I., and used all means to hinder its development. After great efforts by the University, the Royal College was placed under its jurisdiction. The college professors continued to instruct gratuitously, but they had no authority to confer degrees. The number of chairs increased, however, to such an extent that law, medicine, anatomy, the sciences and letters, were represented in the college with a liberty which was unknown in the faculties. This liberty is still to-day the rule in the College of France, which has been entirely separate from the University of France since the beginning of the present century. From 1871 to 1878 seven new chairs were created, and the salaries of the professors have been raised from 1500 dols. to 2000 dols.

AUSTRIA-HUNGARY.

AUSTRIA.—In 1879 the University of Vienna had 257 professors and 3609 students; Gratz, 94 professors and 743 students.

HUNGARY.—The University of Budapesth has the four Faculties of Theology, Law, Medicine, and Philosophy, while Klausenburg has only the three latter Faculties. Budapesth had, in 1878, 7 classes of Theology, 37 of Law, 47 of Medicine, and 73 of Philosophy, the number of students being 2717. Klausenburg, in 1877, had 111 professors and 363 students. All the Schools of Theology, including the Budapesth Faculty, are under the control of the respective religious denominations.

GERMANY.

The following is a list of the German universities and of the number of students attached to each in 1879: Berlin, 4463; Bonn, 1078; Breslau, 1291; Erlangen, 436; Freiburg, 472; Giessen, 340; Göttingen, 1063; Greifswald, 555; Halle, 1064; Heidelberg, 843; Jena, 553; Kiel, 313; Königsberg, 715; Leipzig, 3016; Marburg, 544; Munich, 1664; Münster, 286; Rostock, 193; Strasburg, 787; Tübingen, 1196; Wurzburg, 918.

ITALY.

Subjoined is a copy of the Government report:

In compliance with your request, enclosed is a list of the Italian Universities and Superior Institutes which confer diplomas in Medicine and Surgery. In regard to your inquiry whether foreigners qualified elsewhere are entitled to exercise their profession in Italy, I beg to inform you that, according to the Law Casati, all examinations made and degrees obtained outside our kingdom are utterly valueless, except in special cases of the law. Notwithstanding this, those who have acquired the degree of M.D. in any of the foreign Universities of high standing, and can prove to have successfully passed the necessary examinations, are entitled to dispense with the special ones, and may be admitted to the general examinations for the grade to which they aspire. As for those who have gained well merited honours, and are exceptionally skilled in their special profession, they may be allowed to dispense even with the General examination, but this concession can only be granted on obtaining the approval of the Superior Council of Public Instruction, and it will then be sanctioned by Royal decree.

The students who can certify to have passed in any of the undermentioned Universities one or more of the courses corresponding with those prescribed in the Law Casati may be admitted to the relative examinations without further trouble.*

RUSSIA.

The following is a copy of the official report sent in from Russia. It refers chiefly but not exclusively to the profession of Medicine:

* Royal Universities: Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Parma, Pavia, Pisa, Rome, Sassari, Siena, Turin. Free Universities: Camerino, Ferrara, Perugia. Royal Institute for superior studies: Florence.

Board of Public Instruction, Tchernycheff Place, St. Petersburg,
21st October (2nd November), 1881.

I have the honour to acknowledge the receipt of your letter requesting to be furnished with information as to the Russian Universities, and in accordance with your request I beg to inform you of the following facts:

The names of the Universities of this country are: St. Petersburg, Moscow, Kieff, Kharkoff, Kazan, Odessa, Dorpat, Warsaw, and Helsingfors.

The laws affecting the practice of Dental, Veterinary, and Pharmaceutical Science are quite determinate in Russia and included in the Imperial Code, as well as the laws affecting Medical practice. A short and compendious enumeration of these laws is impossible, because the statutes relating to the matter are very numerous and complicated. The information that I can give you is only that everyone is obliged to pass a regular examination in a Russian University, to have a qualification to practice in this country. No corporations, universities excepted, are able to distribute degrees or diplomas in those sciences.

There is only one special College for military physicians and surgeons in St. Petersburg, but in some other towns of Russia are many Lower Surgeon Colleges and also four Colleges for Veterinary Sciences (at Dorpat, Kharkoff, Kazan, and Warsaw).

The laws affecting the Practice of Women are not yet determinate, as that kind of feminine profession is very recent. At St. Petersburg is a College for Women Physicians, and in some other towns are a few lower colleges of that kind for women studying medical science.

Foreign degrees and diplomas do not give any rights and privileges in Russia, and foreign physicians are obliged to pass an examination at an university of this country.

The same rules exist in Russia in regard to all other faculties and university studies.

The Universities are: St. Petersburg, with 1301 students (A.D. 1877); Moscow, with 1509; Kharkof, 481; Kazan, 536; Kief, 667; Odessa, 372; Dorpat, 786; Warsaw, 546.

SPAIN.*

The Universities are: Madrid, 6672 students (A.D. 1878); Barcelona, 2459; Granada, 1225; Oviedo, 216; Salamanca, 372; Santiago, 779; Seville, 1382; Valencia, 2118; Valladolid, 880; Saragossa, 771. The Universities are supported by the State, which also collects the fees. Exceptions to this rule are the Faculties of Sciences and Medicine at Salamanca and the Faculty of Medicine at Seville, which are supported by their respective municipalities and provinces. All the Universities have a complete Faculty of Law, and all, except Oviedo, have a Faculty of Medicine. Madrid, Barcelona, Granada, and

* See *Special Report* in ADDENDA.

Santiago have Faculties of Pharmacy. Each University, except Oviedo, has a Faculty of Sciences. Faculties of Philosophy and Letters are found in all the Universities. All the Universities confer degrees of Licentiate, but Madrid alone is authorised to confer the degree of Doctor. Theology is not taught in any Spanish University, but in seminaries under the exclusive control of the Bishops.

SWITZERLAND.

In 1879, Basel had 245 students, Berne 385, Zurich 390. The School of Veterinary Surgery at Berne had 28 students. There is at Zurich a Polytechnic School, giving instruction and granting diplomas in Architecture, Engineering, Chemistry.

The particulars relating to the Universities of Switzerland were forwarded to me as an official report by the Government of that country.

NETHERLANDS.

The Dutch Universities are: Leyden, Utrecht, Groningen, and Amsterdam. In 1877-78 Leyden had 627 students, Utrecht 401, Groningen 189, and Amsterdam 339. There is an Agricultural School with 319 students.

FINLAND.

The University of Helsingfors in 1879 had 892 students.

TURKEY.

The following is an extract from a dispatch received by the State Department (U.S.) from the Hon. Edward F. Noyes, United States Minister to France:

At Constantinople, on the magnificent shore of the Bosporus, stands a fine college building founded by Cyrus Hamlin and endowed by the munificence of Christopher R. Roberts, both American citizens. Though established but a few years ago, this college now numbers among its students the children of five or six different races—Greeks, Bulgarians, Armenians, Syrians, and Russians. Near the bridge which joins Galata to old Stamboul is located the Bible house of Dr. Isaac Bliss, formerly an American missionary, but now agent of the American Bible Society of New York. From this house Bibles are daily sent out, printed in the Armenian, the High and Low Turkish, the Greek, and the Sclavonic languages, to all parts of the Turkish Empire where these languages are spoken. At Siras, in the heart of Asia Minor, and at Lake Van, in Koordistan, American missionaries preach and teach. At Marash, in North Syria, near the passes of the Taurus Mountains, another college is springing up, supported by an endowment secured in the United States by Dr. Pratt, an American missionary. There is also at this place a female seminary directed

by Miss Proctor, an American lady. At Latakeea (ancient Laodicea), in Syria, in the only well-built edifice outside the walls, is an American school crowded to overflowing with the peasant children of the back-lying mountains. At Damascus and at Zahleh, in Mount Lebanon, American missionaries superintend schools which they have established in many villages of the neighbourhood, and the plain back of Tyre and Sidon is dotted with primitive schoolhouses under the same or similar supervision. At Haifa (Mount Carmel) a German-American colony has planted vineyards and redeemed large tracts of abandoned lands, while at the same time devoting themselves to the improvement of the natives. In Egypt, at Alexandria, Cairo, and Sioot, the American missionaries have day and boarding schools for both boys and girls, and in Upper Egypt considerable progress has been made. At Cairo there is a most prosperous college in a magnificent stone building, which is doing a grand work for Egypt. The sales of books by the American missionaries in Egypt in the year 1879 aggregated 21,000 volumes, about one-half Bibles and religious books, the other half educational and miscellaneous.

But perhaps the most important and successful of the educational institutions established by Americans in the East is the College of Beyrout, in Syria. It comprises a literary and scientific department, a medical college, and an observatory, all founded and conducted by Americans. Since this college was established the Jesuits, the Papal Greeks, the Greeks, and the Maronites have opened high schools in that city, so that now there are in Beyrout fifty-six schools, with about six thousand scholars, all of which is undoubtedly due to the impulse given to the cause of education by the American missionaries. There is also an American female seminary at Beyrout now in successful operation. The books published by the American missionaries at Beyrout circulate wherever Arabic is read—from Mesopotamia to Tripoli and Tunis, in North Africa. These publications include the Bible in four or five sizes and forms, three or four works on Arabic Grammar, three school arithmetics, algebra, geometry, logarithms, full text-book on astronomy, small school astronomy, geography, hymn books (large and small), elements of music, dictionary of Arabic language, botany, chemistry, anatomy, surgery, practice of medicine, moral philosophy, natural philosophy, books for primary schools, and many others. The salutary influence of American missionaries and teachers in the Turkish Empire cannot possibly be overrated.

CHAPTER II.

UNIVERSITY EDUCATION IN FRANCE.

University of Paris: Faculty of Letters—Faculty of Science—Theological Faculty.

UNIVERSITY OF PARIS.

Faculty of Letters.

To be admitted to the examination for the *Licence*, the candidate must have obtained the Baccalaureat one year previously, and have taken inscriptions during one year at least in two of the courses of the Faculty of Letters. Foreign and other candidates who have attended at some institution other than the University courses of instruction, and passed examinations equivalent to those given and held at the University for the Baccalaureat, may have their studies and examinations recognised, and proceed to the examination for the Licence.

The *examination for the Licence* embraces common and special proofs. The candidate is allowed the choice of his special proof. These special proofs are of three kinds—Letters, Philosophy, History.

The *Common Proof*.—The written part of the examination embraces French and Latin Composition. The candidate may also offer Latin Verse.

The *Special Proofs* embrace—*Letters*: Greek translation; Greek, Latin, or French Grammar. *Philosophy*: A Philosophical Thesis; a Thesis on a subject in the History of Philosophy. *History*: A Thesis on Greek or Roman History; a Thesis on Mediæval or Modern History, with Geography.

The Common and Special Proofs are passed in the same session. Six hours are allowed for each subject, except for the Greek Exercise, which must be done in three hours, and for the Latin Verse, which must be done in four hours.

The oral part of the Common Proof embraces—Explanation of a

Greek Author, of a Latin, and of a French Author. The oral part of the Special Proof embraces—*Letters*: History of the three Literatures —Greek, Latin, and French; Questions on Greek and Roman Institutions. *History*: Ancient, Mediæval, Modern History; Geography. *Philosophy*: Philosophy and its History.

The four inscriptions for the year's curriculum are gratuitous. The *fees* exacted are; For the diploma, &c., 100fr.; for the library at each inscription, 2fr. 50c.

The Greek, Latin, and French books in which candidates will be examined are announced beforehand.

The *Special Licence in Modern Languages.*—A candidate for the Licence ès Lettres who produces certificates of competency in the teaching of foreign languages may be granted the privilege of having the words "*langues vivantes*" inserted in his diploma, provided he fulfil the following requirements. If the certificate he present concern the German language, he must pass an examination (translation and composition) in English, Italian, or Spanish. If the certificate concern the English tongue, he must pass in German, Italian, or Spanish. If the certificate concern the Italian or Spanish language, he must pass in German or English.

The Doctorat ès Lettres.—To be admitted to this degree the candidate must hold the Licence, and write two theses, one in Latin, the other in French, on two distinct subjects. The theses must be publicly defended. The *fee* is 140fr.—For the Baccalauréat, *see* ADDENDA.

Faculty of Sciences.

There are three grades in this Faculty—the Baccalauréat, Licence, and Doctorat.

The Baccalauréat—The candidate must be sixteen years of age at the least. The *fee* is 100fr. 25c. The *examination* is conducted at one time and embraces: The *written part*: Mathematics, Physics, and Latin Translation. Four hours are allowed for the scientific, and three for the Latin work. The *oral part*: Explanation of passages from a French and a Latin Author; Mathematics; Physics; History and Geography; Philosophy; a living Foreign Language, German or English being taken at Paris. The oral part of the examination lasts three-quarters of an hour. A candidate producing the diploma of Bachelier-ès-Lettres is exempted from the literary part of the examination. The same favour, with exemption from part or the whole of the scientific examination, is accorded to those who have passed at some institution other than the University of Paris an examination in

subjects identical with and equivalent in extent to those of the Baccalauréat.

The following details will explain the extent of the examination: Mathematics — Arithmetic, Algebra, with Logarithms; Geometry, Plane and Solid, Plane Trigonometry, Descriptive Geometry, Cosmography. Mechanics—Statics, Simple Machines; Elements of Dynamics and Kinematics; the work of Forces. Physics — Weight, Heat, Electricity, Magnetism, Acoustics, Optics. Chemistry — Inorganic. French—Standard authors, previously announced. Latin—Standard Authors, previously announced. History — Stated Periods. Philosophy of History — Stated Periods. Geography—Physical, Political, Administrative and Economical of France and her Colonial possessions. Philosophy—The Principles of Morals, and the Elements of System. Living Languages — Grammar; Explanation of the Text (previously announced authors); Conversation. Where a candidate intends presenting himself either for the Doctorate in Medicine or the Licence ès Sciences Naturelles, he is required to pass an examination for the Baccalaureat ès Sciences modified in its mathematical part; to the diploma issued the term *restreint* is applied.

The Licence ès Sciences.—There are three varieties of this degree—the Licence ès Sciences Mathematiques, the Licence ès Sciences Physiques, and the Licence ès Sciences Naturelles. The candidate for the Licence ès Sciencces Mathematiques and for the Licence ès Sciences Physiques must have taken the diploma of Bachelier-ès-Science. The candidates for the Licence ès Science Naturelles must have taken the same degree or the diplomas of Bachelier-ès-Lettres and of Bachelier-ès-Sciences Restreint. Every candidate for the Licence must have taken four inscriptions unless he can produce proof of equivalent studies made at some institution other than the University. The *examination* is written, practical and oral. The written proof for the Licence ès Sciences Mathematiques embraces the Differential and Integral Calculus and Mechanics. The written proof for the Licence ès Sciences Physiques embraces Physics and Chemistry. For the Licence ès Sciences Naturelles, the proof embraces Botany, Zoölogy, Anatomy, and Physiology, *oral proofs.*

Licence ès Sciences Mathematiques.—Differential Calculus, Practical Geometry (Applications Geometriques); Integral Calculus; Mechanics —Statics, Kinematics and Dynamics; Astronomy.

Licence ès Sciences Physiques.—Physics; Chemistry (Organic and Inorganic); Mineralogy.

Licence ès Sciences Naturelles.—Zoology, Botany, Botanical Geography, Geology.

The Doctorat ès Sciences.—There are three varieties of this degree—the Doctorat ès Sciences Mathematiques, the Doctorat ès Sciences Physiques, and the Doctorat ès Sciences Naturelles. To obtain the decree of Doctor the candidate must possess the Licence of the corresponding division, submit two Theses, and reply to questions or objections concerning them. The theses in Physical and Natural Science must concern original investigations. The *fee* is 140fr. Printed copies of one of the theses to the number of 100 must be presented to the University. The thesis for the Doctorat ès Sciences Mathematiques must concern some original investigation. The same rule applies to the Doctorat ès Sciences Physiques, and to the Doctorat ès Sciences Naturelles.

Faculty of Theology.

The degrees granted are the Baccalauréat, Licence and Doctorat.

To obtain the degree of *Bachelier en Théologie* the candidate must be twenty-one years of age at the least, have taken the degree of Bachelier-ès-Lettres, have passed a three years' course in a Theological Seminary, have taken four inscriptions in the Faculty of Theology, submit to an examination in the matters hereinafter mentioned, present a dissertation in Latin, and sustain it before the Faculty.

To obtain the degree of *Licencié* it is necessary to hold the diploma of Bachelor, to have taken four new inscriptions, to submit to an examination in the subjects mentioned below, to present a thesis in Latin or in French, and to sustain it before the Faculty. Permission may be granted to take the inscriptions simultaneously. Before presenting himself for examination the candidate must submit his theses. Licentiates desiring to obtain the Doctorate may present the thesis required and submit to the necessary examination immediately after obtaining the Licence. The total *fee* for the Baccalauréat and the Licence respectively is 25fr., for the Doctorat 60fr.

Examination for the Baccalauréat.—Subjects: Dogmatic Theology, Morals, Ecclesiastical History, Holy Scripture.

Examination for the Licence.—Subjects: Sacramental Theology (Holy Baptism, Confirmation, the Eucharist, Penance, Extreme Unction, Orders, Marriage), Moral Theology, Ecclesiastical History, Holy Scriptures, Canon Law.

Examination for the Doctorat.—Subjects: Dogmatic Theology, Ecclesiastical History, Holy Scriptures, Canon Law.

The examinations are written and oral.

CHAPTER III.

UNIVERSITY EDUCATION IN AUSTRIA.

University of Vienna: the Legal Faculty; the Faculty of Philosophy; the Faculty of Theology.

VIENNA is well endowed with resources for superior education. Its School of Medicine is described as the best in Germany. It has public classes for Philosophy, the Classical Languages, Literature, Law, and Theology, and a seminary for Oriental Languages. The Imperial Library is very extensive, consisting, it is said, of 12,000 manuscripts, 300,000 printed volumes, and a great collection of engravings. The Library of the University contains 90,000 volumes. The imperial collection of medals and coins is accounted the most complete in Europe.

The chief Austrian university is that of Vienna. As to the rest, it is only necessary to say that all the universities of the Empire have nearly identical statutes.

UNIVERSITY OF VIENNA.

The following are the regulations concerning the Degree of Doctor in the various Faculties:

Faculty of Law.

Rigorosen Ordnung for the degree of *Doctor*:

(1) To obtain the degree of Doctor of Laws it is necessary to pass three Severe examinations. The entrance to these depends upon the production of proof that the candidate has pursued the necessary studies, to which end he must deposit with the Dean a certificate that he has passed the *Professoren Collegium*.

(2) The three examinations include the following subjects: I. Roman, Canon, and German Law; II. Austrian Civil Law, Commercial Law, Law of Exchange, Austrian Civil Process, Criminal Law; III. General and Austrian State Law, Law of Nations and Political Economy, National Economy, and the Science of Finance.

(3) Difference of religion does not relieve the candidate from the necessity of undergoing a Severe examination on the Canon Law.

(4) The three Rigorosen examinations must be held in the same university in the order preferred by the candidate.

(5) Each examination will be held publicly and last two hours.

(6) Between two Rigorosen examinations a period of at least three months must elapse. Should the candidate, however, have distinguished himself by the excellence of his answers at a preceding examination, the Dean has the power of shortening this period.

(7) The Examining Committee, the Dean, the Professors of the College, as well as four professors of the subjects of examination, as examiners, are present, and have a right to take part in the examination. . . .

(12) The results are classified thus: "very good;" "sufficient;" "insufficient."

(13) Should the candidate be unsuccessful he is not permitted to enter again for examination for three months; and if unsuccessful at the second trial, he must not appear for another year. A third failure debars him for ever from taking the degree of Doctor of Laws in any university of the Empire, or from making use of a foreign diploma.

(14) The *fee* for each Rigorosum is 60fl., and for each re-examination 30fl. . . .

(18) The *fee* for the degree in all Austrian Universities is 60fl.

Faculty of Philosophy.

Rigorosen Ordnung for the degree of *Doctor*:

(1) To obtain the degree of Doctor of the Faculty of Philosophy of a University in the Austrian Empire, it is necessary to write a scientific treatise and to pass two Severe examinations (*Rigorosen*). The candidate must have attended for three years, as a matriculated student, an Austrian or foreign university. In exceptional cases, the admission of candidates who cannot produce this necessary proof may be permitted by the Minister of Education on the recommendation of the professors of the college.

(2) The thesis, which must be either written or printed, must treat of some subject chosen by the candidate from the department of Philosophy, and must furnish proof that the candidate is well instructed in the subject of which it treats, and able to reason justly, and express his ideas well.

(3) The Dean allows a reasonable time for the examination of the scientific worth of the thesis by two referees, and afterwards by the professors of the subject of which it treats.

(4) These decide whether the candidate shall be admitted to the examination Rigorosum.

(5) Of these two examinations the first comprises: A, Philosophy. (The extent of this examination will be fixed with reference to the subject upon which the thesis was written). The second comprises: B, The following groups according to the choice of the candidate—either: (*a*) History in conjunction with Greek and Latin Philology; or (*b*) Classic Philology in conjunction with the History of the Old World; or, (*c*) Mathematics and Physics, or one of these two subjects in connection with Chemistry; or finally, (*d*) a department of Natural Science (Zoology, Botany, or Mineralogy), with either Mathematics or Physics. . . .

(7) These examinations are held publicly: the duration of the examination which proves the candidate's knowledge of the subject which he has chosen for his thesis lasts two hours; the other examination, an hour. The results are classified as "very good;" "sufficient;" or "insufficient." . . .

(9) The candidate is allowed to decide the length of the interval between the first and second examination above described. Should the candidate be rejected he is not permitted to enter again for examination for three months; and if unsuccessful at the second trial he must not appear again for a year. A third failure debars him for ever from taking the degree of Doctor of Philosophy in any university of the Empire, or from making use of a foreign diploma.

(10) The *fees* are: For examination of diploma, 20fl.; for the Rigorosum of two hours' duration, 40fl.; and for the examination of one hour's duration, 20fl. in Austrian currency.

(12) The degree is conferred under the presidency of the Rector, in the presence of the Dean, by one of the professors in ordinary.

(13) The *fee* for graduation in all Austrian universities, except Vienna, is 30fl. in Austrian currency.

Faculty of Theology.

The regulations concerning the degree of *Doctor* are contained in the following section of the statutes:

Section 19. To obtain the degree of Doctor of Theology, the candidate must produce certificates from his professors that he has satisfactorely pursued the requisite course of study before he is permitted to enter for examination. Students of Theology who have distinguished themselves by their proficiency in Theological Science may enter for examinations in their fourth year. Four Severe examinations are necessary: (1) On Church History and Church Law, according to the principles laid down in Synopsis Juris Ecclesiastici. (2) On the Bible, Old and New Testaments, with the Languages of the Bible. (3) On Divinity. (4) On Moral and Pastoral Theology.

In the examination on Biblical Studies, two examinations are held, on account of the large number of Biblical subjects—the first on the subjects of the Old

Testament, and the second on the New; nevertheless, fees are charged for one examination only.

After the candidate has passed the examinations he receives only the Baccalauréat of Theology from the Dean. Should he wish then to obtain the Doctorate, he must publicly defend fifty dogmas, chosen from the whole range of Theology, and send in for the criticism of the Director a Thesis on some important theological subject. Should the Thesis be approved of, the candidate may print it, and distribute copies at the public debate.

The *fees* for each examination amount to 4 ducats; for the public disputation *pro doctoratus*, 8 ducats; for the Baccalauréat, 4 ducats; for the Doctorate, 7 ducats; *i.e.*, in all, 31 ducats.

CHAPTER IV.

UNIVERSITIES IN GERMANY.

Royal Frederick William University of Berlin—University of Kiel—University of Freiburg — University of Erlangen — University of Heidelberg—University of Jena.

Royal Frederick William University of Berlin.

Regulations concerning the Degrees in the *Legal Faculty*:

Four conditions must be fulfilled: 1. The production of an original Thesis of sufficient excellence. 2. The written interpretation of a text chosen from the Roman, German, and Canon Law. 3. An oral examination. 4. A public disputation on the printed thesis.

The candidate when he sends in his application must produce—1. A certificate of maturity, if he be a German. 2. Certificate of Departure from the Royal Frederick William University when the candidate has matriculated there; but when he has not matriculated at the said university he must do so, and for this it is not necessary to pay any fee. 3. A dissertation on Jurisprudence, which the candidate may write in Latin or German. 4. Short sketch of the candidate's life, his religious belief, and education. 5. Petition to the Faculty in Latin or German for permission to *enter* for his examination. Should the Thesis prove satisfactory, the candidate must give a written interpretation of three texts, and German must be the language used, unless special permission for the use of Latin has been given.

After the approval by the Faculty of the interpretation of the texts the oral examination is held.

The Thesis must be printed at the candidate's own cost, and at the public debate thereon the German language must be used.

The *fees* amount to 355 marks, of which 170 marks are for the oral examination, and 185 for the granting of the diploma.

Regulations concerning Degrees in the *Faculty of Philosophy*:

The following conditions must be fulfilled: 1. The production of an original

Thesis of sufficient excellence. 2. The undergoing of an oral examination by the candidate. 3. A public debate, in which the candidate must defend his printed Thesis. None of these three conditions can be dispensed with.

With the application the candidate must send in: 1. Certificate of maturity when the candidate is a Prussian. 2. Certificate of departure from the Royal Frederick William University when the candidate has matriculated there, but when he has not matriculated at the said university he must do so, and for this it is not necessary to pay a fee. 3. A Thesis, which must be written in Latin when it treats of Classics, Oriental Philology and Archæology, Ancient History or the Old Philosophy. When the candidate has chosen other subjects than these, he has the choice of German or Latin, on the understanding that the same language must be used for the Thesis and public debate. 4. The written declaration of the candidate that he has written the Thesis himself without assistance. 5. Short sketch in Latin of his life, religious belief, and previous studies. 6. Petition in Latin to the Faculty for permission to enter for the degree. When these conditions are fulfilled, and the Thesis pronounced sufficiently good by the Faculty, the candidate is submitted to oral examination. The *fees* amount in all to 355 marks, of which 170 are for the oral and 185 for the granting of the diploma.

University of Kiel.

Legal Faculty.

Regulations concerning the degree of Doctor:

I. Graduation *in absentia* has not been permitted since 3rd October, 1861. No degree can be conferred except *in præsentia*.

II. Graduation requires: 1. An application, written in German, for admission to the graduation of the Legal Faculty, to which must be added (*a*) a *curriculum vitæ*, written in German; (*b*) for Germans a certificate of completion of the courses of study for a gymnasium; (*c*) proofs of at least three years' study of Law; (*d*) a thesis written in German or Latin on some subject of Jurisprudence chosen by the candidate, who must make a declaration on oath that he has composed the dissertation himself; should the dissertation be approved by the Faculty, and the candidate be allowed to graduate, the latter must print the thesis at his own cost, after the Dean has given his sanction, before the degree can be conferred. 2. After the thesis has been approved the candidate must submit three passages to written interpretation—one from the Roman, one from the Canon Law, one from old German Law. These interpretations must be written in German. They are composed openly, and without limitations as to the consultation of scientific authorities. 3. Should these interpretations be satisfactory to the Faculty the candidate must undergo an oral examination. 4. Should he pass the oral he must send in a certain number of theses on the different departments of Jurisprudence for the approval of the Dean of the Faculty. These theses, as well as the dissertation, he must (afterwards) defend against all comers in a public debate (in which the

language used is German), held under the presidency of the Dean. After the close of this disputation, and administration of the Doctor's oath in Latin, the Dean proclaims the candidate as Doctor of Laws. 5. The Faculty has the power of relieving the candidate from the interpretation of the texts and other public reading of his theses and debate thereon.

III. The honorarium for the degree, which must be paid before the beginning of the oral examination, is 450 marks. The candidate must also pay the cost of printing of the invitations to the public debate and the conferring of the degree, and the cost of the diploma.

Theological Faculty.

The regulations are as follow:

1. The Theological Faculty of Kiel bestows two academical degrees, viz.: that of Licentiate, and that of Doctor of Theology.

2. He who wishes to obtain the *Licentiate* must send in writing to the Dean of the Faculty a gymnasial certificate of "maturity" and his certificate of departure from the University, as well as a *curriculum vitæ*. Permission to enter for the degree can only be granted when at least two years have passed since the candidate finished his academical course.

3. Candidates for the degree of *Doctor of Theology* must send in writing to the Dean of the Faculty a *curriculum vitæ*. Only those who have been educated in a Theological academy or Higher Church college, or who have already made a name in Theological science by literary work, are permitted to enter for this degree.

4. The candidate must write a thesis in Latin or German on some theological subject; or in place of the thesis may send in a book already printed of which he is the author. Should this be satisfactory to the Faculty the candidate is permitted to enter for examination *pro gradis*. The examiners for this degree must be Doctors of Theology.

5. The examination extends over all departments of Theological science, as well as over the Systems of Philosophy which are in relation with Theology. Each member of the Faculty who is entitled (according to section 4) to take part in the proceedings has the right to examine. At the conclusion of the examination a meeting is held under the presidency of the Dean, at which the candidate's fitness for the degree of Doctor of Theology is decided by the votes of the Faculty.

6. When the examination for the degree is successfully passed the candidate is submitted to the test of a public debate. For this occasion he must have printed in Latin or German a number of theses which have already been approved by the Faculty, and he is obliged to defend them in public debate under the presidency of the Dean.

7. At the close of the debate the candidate will be publicly admitted by the Dean to the degree of Doctor of Theology, and his diploma handed to him. In the diploma the thesis which has been approved by the Faculty must be men-

tioned, and the result of the examination registered "*cum laude*" or "*summa cum laude.*"

8. The *fees* for the degree of Licentiate amount to 75 thalers; for the Doctor of Theology, 150 thalers.

9. Degrees are not conferred on absentees. Honorary degrees can only be conferred by the *unanimous* decision of the Faculty; the cost of the same will be defrayed out of the exchequer of the Faculty.

Degree of Doctor in Philosophy.

The regulations are:

Each candidate for the degree of Doctor of Philosophy must fulfil the following requirements:

(1) He must send in a printed or written thesis, in Latin or German, on some scientific subject. Those theses which treat of the subjects of Classical Philology must be written in Latin; and each thesis must be accompanied by the candidate's sworn statement, in his own handwriting, that the essay is his own composition.

(2) School and university certificates, or other documents, must be produced, which testify to the candidate's general scientific education, and also a short history of his career.

(3) The Faculty having approved of the thesis, the candidate must undergo an oral examination.

(4) The examination being over, the candidate in open disputation must defend his thesis and others against three opponents selected by himself. The Faculty has the power of dispensing with this disputation, under special circumstances.

(5) The fees amount in all to 200 marks. Should the candidate fail to pass, a portion of this money will be returned to him.

(6) The candidate is obliged to print at his own cost 200 copies of the thesis for distribution amongst the members of the Faculty.

UNIVERSITY OF FREIBURG.

Degree of Doctor in Philosophy.

The regulations prescribe:

1. The candidate must send in to the Faculty: (*a*) A petition to the Faculty for permission to enter for the degree. (*b*) His *curriculum vitae*, and, in case he is not a matriculated student of Freiburg, proof of his position in life. (*c*) Certificate of his education, especially of at least three years' academical study, of which one semester has been spent at a foreign university or foreign institution for higher technical education. (*d*) An original thesis on some subject included in the department of Philosophy. The candidate must sign his name to a written declaration, on his word of honour, that the thesis is original. (*e*) The *fees* amount to 300 marks.

2. If the thesis is considered satisfactory the candidate must undergo an oral examination, which comprises a chief subject (the same as the subject of thesis) and two minor subjects.

3. Should the thesis not be considered satisfactory, 100 marks will be returned to the candidate. Should he also fail in the oral he will receive back 50fr. more. Should he re-enter for examination he will be obliged to pay only 150 marks. The result of the examination is classified as follows: 1. *Summa cum laude*; 2. *Insigni cum laude*; 3. *Multa cum caude*; 4. *Cum laude*; 5. *Rite*.

University of Erlangen.

To obtain the degree of *Doctor of Philosophy* of this University the following conditions must be fulfilled:

(1) A petition to the Faculty for permission to enter for the degree; with which must be sent: (*a*) Short sketch of the candidate's life and education; (*b*) a certificate that his University studies have extended over three years. Candidates who have taken a three years' course at the Polytechnic School require only one year of study at the University; (*c*) a scientific treatise on some subject of Philosophy, which the candidate must state on his word of honour is original (this may be written in Latin or German); (*d*) if the theses treat of some subject in the Philosophico-Historical section of the Faculty, a certificate of completion of the course of study of a gymnasium must be sent in (for candidates who are not German subjects, this is not necessary). (2) Candidates for the degree of Doctor in the department of Natural History must produce maturity certificates from a "Humanistisch or Real-gymnasium."

Should the foregoing conditions be satisfactorily fulfilled, the candidate must undergo an oral examination, the time for which will be arranged by the Dean and candidate. The examination extends over the subject of which the thesis treats as principal subject of examination; and two other subjects, which the candidate must name to the Dean before the examination. For the choice of chief and secondary subjects there are: A. in the Philosophico-Historical section: (1) as chief and secondary subjects: Systematic Philosophy; History of Philosophy; Pedagogical Science; Classic Science of Language; Classic Literature; Classical Antiquities; Germanic Philology; Philology of the Modern Languages, Romance, or English; Oriental Philology; History of the Arts; Political Science. (2) One of the minor subjects may be chosen from the department of Mathematics and Natural History. B. The Section of Mathematics and Natural History; as chief and minor subjects, Physics, Chemistry, Mineralogy, Geology, Botany, Zoology.

(1) One of the minor subjects may be chosen out of section A. (2) The successful candidate must print his thesis. (3) The *fees*, amounting to 296 marks, must be paid to the Dean before the oral examination. (4) Should the candidate not undergo the oral examination, 209 marks will be returned to him.

University of Heidelberg.

Regulations concerning the Degree of the Philosophical Faculty.

A candidate for the degree of Doctor of Philosophy must address himself in writing to the Faculty, and inclose a *curriculum vitæ*, giving sufficient information as to his previous career and education.

He must also enclose a certificate of moral character from the university where he has pursued his studies, a certificate that he has completed the curriculum of the said university, and a Maturitatszeugniss (certificate of maturity) in case he possess one, and the other documents necessary to prove the truth of his statements. The candidate must pass an oral examination before the assembled members of the Faculty, before he can obtain the degree of Doctor of Philosophy. The composition of a thesis is not a necessary condition; but should one be written, and approved by the Faculty, it will not only be taken into account in deciding the result of the examination, but will be mentioned in the diploma. Moreover, should the author have 180 copies printed within six months after he has obtained the degree, the sum of 20 marks shall be returned to him out of his fees to defray the expense of printing.

The *oral examination* comprises the three undermentioned subjects, of which one is the principal subject, the other two secondary. The holding of the examination in any modern language except German is not permitted. The candidate, in his application, selects the chief subject and secondary subjects of examination. Over the admissibility of his selection the Faculty decide according to the Statutes.

As chief subject any of the following may be chosen: 1. Philosophy; 2. History; 3. Comparative Science of Language; 4. Classical Philology; 5. Archæology; 6. Semitic Languages (viz., Hebraic, Arabic, and Aramaic) and Literature; 7. Sanscrit or Persian Language and Literature; 8. Turkish Language—literature; 9. German Language and Literature; 10. Romance (Languages) and Literature; by the regulations concerning groups 6, 9, and 10, an accurate knowledge of one language and literature and a general knowledge of the remaining subjects of the group are required; 11. General Science of State and Politics; 12. Science of Government; 13. Political Economy (including Science of Finance); 14. Statistics; 15. Mathematics; 16. Natural Philosophy; 17. Chemistry; 18. Mineralogy (with Geognosy and Geology); 19. Botany; 20. Palæontology; 21. Zoology; 22. Agricultural Science; 23. State Law; 24. Law of Nations; 25. Law of Governments. The secondary subjects of examination may be chosen from such of the above-mentioned sciences as are auxiliary to the chief subject of examination.

Where no sufficient *Maturitatszeugniss* can be produced by the candidate, and Classic Philology is not one of the subjects of examination chosen by him, he must undergo a school examination in Latin at the commencement of the examination by the Faculty. The chief subject will be mentioned in the diploma. The results of the examinations are classed as: 1. Summa cum laude; 2. Insigni cum laude; 3. Multa cum laude; 4. Ohne Pradicat. The *fees* must be depo-

sited before the examination with the Questor; they amount in all to 420 marks.

University of Jena.

Regulations Concerning the Degree of Doctor of Philosophy.

Before a candidate can obtain the degree he must fulfil the following conditions:

1. Write to the Dean of the Philosophical Faculty for permission to enter for the degree and state the subject he has chosen for the oral examination. He must declare that he is acquainted with the conditions of examination and promise to observe them, and the document must be written and signed by his own hand.

2. A short sketch of his life in Latin or German.

3. A maturity certificate from a gymnasium or for Mathematics and Natural History, a maturity certificate from a first-class "Real Schule."

4. Proof of at least three years' academical study (these two certificates shall be returned to the candidate).

5. Proof that he has enjoyed a good reputation up to the present time, from a competent authority.

6. An original scientific treatise in German, in the candidate's own handwriting. Treatises already published must not be sent in.

7. Written declaration on word of honour and oath that the thesis is the candidate's own composition.

8. Payment of 240 marks.

If the Faculty permit the candidate to enter for the oral examination, the subject of which the thesis treats is the chief subject of examination, and the candidate is allowed the choice of two minor subjects. The *subjects of examination* are: Philosophy (including Pedagogical Science), History, Geography, Machinery, History, Science of Comparative Language (including Sanscrit), Semitic Philology, Germanic Philology, Modern Philology (including English and Romance Languages), Classic Philology (Greek and Latin), Political Science (including Political Economy and Statistics), Mathematics, Physics, Higher Mechanics, Chemistry, Mineralogy, Botany, Zoology, with particular reference to the special studies of the candidate.

Having passed the oral examination, the candidate must print and distribute to the Faculty 280 copies of his thesis.

The degree will then be conferred.

CHAPTER V.

UNIVERSITY EDUCATION IN ITALY.

Constitution and Government of the Universities—Topographical Distribution of Studies—The Several Faculties—Table of Fees—Subsidies and Rewards.

In Italy University education is regulated by the State, and, subject to prescribed payments at the hands of students, is maintained from the public funds. It is conducted at various local centres, which, though varying as to the particular departments of learning established, are governed by a common statute. The information to be given must therefore be general, and the following details, which happen to be supplied from the University of Naples, are applicable, so far as they go, to every University in the kingdom.

The regular inspection and ultimate control of any university vests in the Minister of State; but its immediate administration is in the hands of its proper authorities, viz.: (1) The Rector, (2) the Academical Council, (3) the Presidents of Faculties, (4) Councils of Faculties, (5) the General Assembly of Professors.

Five Faculties are recognised; (1) Philosophy and Letters; (2) Jurisprudence; (3) Mathematical Science; (4) Natural Science; (5) Medicine. Special teaching in Classical and Oriental Languages, Diplomacy, and Palæography, with all technical instruction, is provided in special establishments outside the University.

The following statement shows the present topographical distribution of University studies and the nature of the several Faculties:

Faculty or Study.	Universities in which the Faculty or Study is Established.
Belles Lettres and Philosophy	Turin, Bologna, Pisa, Palermo, Catania, Messina, Academy of Milan.
Physical, Mathematical and Natural Sciences	All, with the exception of Siena, Macerata and Urbino.

Faculty or Study.	Universities in which the Faculty or Study is Established.
Jurisprudence	All.
Theology	Turin, Modena, Pisa, Palermo, Catania, Messina, Genoa, Cagliari, Siena.
Surveying	Turin, School of Application, Modena, Macerata, Palermo, Catania, Cagliari.
Notaryship	All, with the exception of Pavia, Bologna, Parma, Pisa and Siena.

Art. 6.—The Faculty of Philosophy and Letters comprises the following sections: 1. Rational Philosophy; 2. Moral Philosophy; 3. History of Philosophy; 4. National History; 5. Philosophy of History; 6. Science of Geography and Statistics; 7. Æsthetics; 8. Italian Literature; 9. Latin Literature; 10. Greek Literature; 11. Oriental Literature; 12. Comparative Literature; 13. Archæology; 14. Scholastic Teaching; 15. Philology; 16. History of the Church.

The Faculty of *Jurisprudence* comprises: 1. Philosophy of Law; 2. History of Law; 3. International Law; 4. Constitutional Law; 5. Roman Law; 6. Ecclesiastical Law; 7. Civil Laws; 8. Judicial Order and Civil Procedure; 9. Penal Laws and Procedure; 10. Law of Commerce and Navigation; 11. Administrative Law; 12. Public Economy; 13. Comparative Internal Public Law; 14. Comparative Internal Private Law.

The Faculty of *Mathematical Sciences*: 1. Higher Algebra and the Theory of Numbers; 2. Geometry, with two and three co-ordinates; 3. Descriptive Geometry; 4. Introductions to Sublime Calculation; 5. Integral and Differential Calculation; 6. Rational Mechanics; 7. Applied Mechanics; 8. Astronomy; 9. Mathematical and Geodesial Geography; 10. Superior Geometry; 11. Hydraulics.

The Faculty of *Natural Science*: 1. Physics with Cabinet; 2. Terrestrial and Meteorological Physics with Cabinet and Observatory; 3. Inorganic Chemistry, with Laboratory; 4. Organic Chemistry, with Laboratory; 5. Geology; 6. Mineralogy, with Cabinet; 7. Botany, with Garden; 8. Zoology, with Cabinet; 9. Comparative Anatomy.

There are two classes of *Students* in the University—Students proper and "auditors." Students proper are admitted to the required faculty by public examination; those who wish to attend any of the courses without being subjected to the examinations are received as auditors. These latter, however, cannot be admitted to degree examinations without having passed the students' examinations; but they may at any time assume the privileges of students, on complying with the prescribed conditions.

The *scholastic year* has a duration of nine months and a half,

comprised, at the discretion of the Council, within the 15th of October and the 30th of the following July. The *vacations* are: Sundays and other civil festivals, twelve days at Christmas, eighteen days at the Carnival, the National Fête-day, and the King's birthday anniversary.

Italian is the *official language* of the instructions and examinations; but it is intimated that "facilities will be given to students to qualify themselves in the Latin tongue."

For *matriculation* the regulations are thus prescribed in chap. ii. of the Act. Art. 9, it will be noticed, relates specially to foreigners; and it may be added, in this place, that examinations passed or degrees received beyond the kingdom are of no avail in Italy:

Art. 8.—To matriculate, students must make application to the Secretary of the University. Therein, besides the names of the student and his parents, must be given (*a*) place of birth; (*b*) the residence of his family; (*c*) his own residence in the city; (*d*) mention of the faculty in which he intends to enter. The application must be accompanied by the following documents: 1. Certificate of birth; 2. The original diploma of legal licence or the other credentials which, according to the regulations, are necessary for admission to the various courses; 3. The receipt for payment of the matriculation fee, and of the first instalment of the entrance fee. An auditor must present his application accompanied by the same documents, and produce his receipt for the payment of the prescribed fees. If, however, he only wishes to enter for a single course, he is not obliged to produce the papers indicated at Clause 3. He may also acquire the title of student on producing proof of having complied with all the conditions imposed on students. Auditors of a single course will only have finished the courses after acquiring the titles indicated above at Clause 2. Ladies may be entered in the register of students and auditors, in case they present the documents required in the preceding paragraphs, or equivalents.

Art. 9.—Foreigners who wish to matriculate as students in an Italian University must present a formal certificate of having completed the secondary studies if they wish to enter for the first University year, and, together with this certificate, if they wish to enter for another year, for the other courses pursued in the University. The Councils of the Faculties of Philosophy and Letters, and of Mathematical, Physical, and Natural Science, will judge if the Certificate of secondary studies is equivalent to the legal Licence; and the Council of the Faculty in which the applicant wishes to enter must decide if, and to what year of the course the studies pursued in a foreign university apply. The decision of the Council of the Faculty will be communicated from time to time to the Minister, and, on the advice of the Superior Council, confirmed or amended by him.

Art. 10.—The time allowed for presenting the application mentioned in Art. 8 will be twenty-five days, commencing fifteen days before and ending ten days after the opening of the scholastic year.

Art. 11.—The Secretary will add daily to the list the names of students and auditors whose applications have been found regular.

Art. 12.—Students and auditors, as soon as they see their names published, will present themselves to the Secretary and receive from him the ticket of admission.

Faculty of Philosophy and Letters.

The course of study is of four years' duration. The Faculty confers two degrees, one in Philosophy, and the other in Letters; also two certificates, one called the Licence, and the other the Degree certificate. Following are the explanatory articles of the Regulations:

Art. 6.—To be admitted to the examination for the *Licence*, the student must have pursued for two years the course of Italian Literature, Latin Literature, and Greek Literature; for one year a course of Theoretical Philosophy, Comparative History of the Classical and Modern Latin Languages; Ancient History; Modern History; Geography. For these studies and the others which he has pursued, according to the General Regulations, he must take a certificate of diligence.

Art. 7.—The examination, which is held in two distinct sittings, refers to all the subjects mentioned in the preceding article, and consists: (1) Of the presentation of an essay in Italian on a critical, historical, or grammatical subject. The professors will question the student on the matter of the said essay. (2) Of a composition written in Latin on a subject given by the examining commission, and selected in such a manner that the student may be able to treat it with the use only of dictionaries. For this composition at least six hours will be allowed. (3) Of a conversation of at least an hour with the examiners, on the subjects which are prescribed by Art. 6, and are not treated of in the two written examinations. The division of the subjects for each sitting will be fixed by the Faculty at the begining of the scholastic year. The student will be at liberty to present himself for the first as well as the other. On the proposition of the Faculty, and with the consent of the Minister, one of the two sittings may be held at the end of the first year. N.B.—In this case it is ordered that the two written attempts, or at least the free essay in Italian, should be put off to the second year, and that the oral examination should be divided in such a manner that youths shall at the end of the first year undergo an examination on the annual subjects of their studies in the first year, and another at the end of the second year on the annual subjects studied in the second year (Ministerial Note of the 23rd May, 1877.)

Art. 9.—To be admitted to the examination for the *degree*, the student must have pursued the instructions of the Faculty for two years more, and have obtained the certificate of diligence for the courses determined in Art. 10 or in 11, as well as for the other instructions which he must have followed according to the General Regulations.

Art. 10.—To obtain the *degree in Letters*, the student will in the second biennial term attend a course of: Italian Literature; Latin Literature; Greek

Literature; Ancient History; Modern History; Archæology; History of Philosophy.

Art. 11.—To obtain the *degree in Philosophy* the student will, in the second biennial term, attend a course of History of Philosophy; a course of Theoretical Philosophy; Moral Philosophy; Greek Literature; Italian Literature; Ancient History; Educational Science; besides a course of Physiology, or another of the Natural Sciences to be appointed by the Faculty.

Art. 12.—The examinations for each of the two degrees will turn on the subjects indicated in Articles 10 and 11, and will be held in the form prescribed in the examination for the Licence, before a commission composed of official professors of the subjects of examination, with whom shall be connected, on the proposition of the Faculty, one or two examiners selected from private teachers, or from the assembled doctors where they exist, or all outside the Academical Body. For the degree in Philosophy both the examinations may be written in Italian. N.B. Besides the sittings for these examinations for the degree, may be held the one at the end of the third, the other at the fourth year of study, by the rules indicated in the examinations for the Licence; that is to say, that at the end of the third year the student may be admitted to undergo the oral proof of conversation on the subjects studies for which end in the aforesaid year (Ministerial Note, 12th June, 1877).

Art. 13.—The Licence is an indispensable condition for aspiring to the name of professor in teaching the three first classes of the Gymnasium and of the Technical Schools. The after proofs, and the other conditions which may be prescribed by the State with a view to conducing to an effective use of the teaching, will be determined in a Ministerial regulation.

Art. 15.—The School of Instruction is divided in three sections, viz.: Philological, Historical, and Philosophical. In order to obtain the special diplomas of each section, the candidate must be prepared to follow its course of preparation for two years before having attempted the degree.

Art. 16.—The Philological Section is composed of Professors of Italian Literature, Latin Literature, Greek Literature, Comparative History of Classical and Modern Latin Languages, Archæology. It will be obligatory on each student entered for this section to attend the course of Comparative History of Modern Latin Literature where this subject is taught. The Historical Section is composed of Professors of Ancient History, Modern History, Geography, Archæology, Italian Literature. Students entered for this section must attend the course of Statistics, Physical Geography, and Philosophy of History, where these studies are taught in the several faculties. The Philosophical Section is composed of Professors of Philosophy, History of Philosophy, Anthropology and Pedagogy, Greek Literature, Italian Literature. Students entered for this section must attend the course of Philosophy of History where this study is taught.

Art. 18.—The studies for *Doctor* consist, besides those required by the degree, of special exercises intended to render the student not only apt in original

research and explanation of scientific doctrines, but also expert in the methods and limits of the subject.

Art. 21.—The application for admission to each of the sections must be made to the director of the school, accompanied by the diploma of Licentiate in Philosophy and Letters.

The Faculty of Mathematical, Physical, and Natural Sciences.

The necessary information is contained in the following articles selected from the Regulations:

Art. 2.—The following are common to all the Faculties of Science: Experimental Physics, Chemistry, Mineralogy, Geology, Zoology, Comparative Anatomy and Physiology, Botany, Algebra, Fractions, Analytical Geometry, Projective Geometry with Design, Descriptive Geometry with Design, Elementary Design of Ornament and Architecture (which may be taught in the Academy of Fine Arts, where such exists in the city in which the University is established). The following belong to the Faculties of Science and carry out the intention of Article 4: Rational Mechanics, Astronomy, Mathematical Physics, three complementary courses of Mathematics; a course of Physical Geography may also be instituted.

Art. 3.—The subjects indicated in Art. 2 are completed in a year, with the exception of Design in Ornament and Architecture, the first of which is taught for two years, and the second for six months.

Art. 4.—The Faculty of Science confers: (1) The Licence in Mathematical and Physical Sciences; (2) the Licence in Natural Sciences; (3) the Degree in Mathematics; (4) the Degree in Physics; (5) the Degree in Chemistry; (6) the Degree in Natural Sciences.

Art. 5.—The obligatory subjects for Licence in Mathematical and Physical Sciences are: Experimental Physics, Chemistry, Algebra, Fractions, Analytical Geometry, Projective Geometry with Design, Descriptive Geometry with Design.

Art. 6.—The obligatory subjects for Licence in Natural Science are: Experimental Physics, Chemistry, Mineralogy, Botany, Zoology, Comparative Anatomy and Physiology.

Art. 7.—The subjects indicated in Articles 5 and 6 will all be accompanied by frequent and convenient practical experiment. To assist the professors in their demonstrations there may be assistance in the faculty.

Art. 8.—Both the Licences are obtained by examination. The student is admitted after having followed the biennial course, indicated in Articles 5 or 6 (which treat of the Licence in Mathematical and Physical Science, or of the Licence in Natural Science), and having obtained corresponding certificates of diligence in accordance with the conditions of the General Regulations.

Art. 9.—The *examination* for the *Licence in Mathematical and Physical Science* is held in three sittings: In the first the candidate is examined in Algebra and Fractions, in the second in Analytical Geometry and Projective

and Descriptive Geometry, and in the third in Physics and Chemistry. The examination for Licence in Natural Science is held in two sittings. In the first the candidate is examined in Physics and Chemistry; in the second, in Botany, Mineralogy, Zoology, Comparative Anatomy and Physiology. Each sitting will last an hour, and the examining commission will require written and practical proofs in all subjects to which they refer.

Art. 10.—On the proposition of the Faculty, and with the consent of the Minister, the various sittings in which the examination for Licence is completed may also be held, part at the end of the first and part at the end of the second year. The order in which the attempts are made is left to the discretion of the student.

Art. 12.—The Licence in Mathematical and Physical Science, together with certificates of diligence in the courses of Mineralogy, Geology, Design in Ornament and Architecture, with the respective proofs, are available for admission to the School of Application. It opens, besides admission to students for degrees in Mathematics, Physics and in Chemistry, the Licence in Natural Science, and together with a sample of Free-hand Drawing, gives admission to the student for degrees in Natural Science and in Chemistry. To the studies for Degree in Natural Science those only can be admitted who have obtained the Licence in Mathematical and Physical Science or that of Faculty of Medicine; but first to present themselves for examination for the Degree, they must obtain the certificate of diligence in the subjects prescribed for the Licence in Natural Science which are not included in the examination passed for Licence.

Art. 13.—The *Degree in Mathematical, Physical, Chemical, and Natural Sciences* is obtained by means of a second two years' study, and an examination. To the courses for this second two years none can enter who have not obtained the corresponding Licence according to the preceding articles.

Art. 14.—For the *Degree in Mathematics* it is necessary to have followed during the two years a course of Rational Mechanics, and no less than four other annual courses selected from those indicated in Art. 12.

Art. 15.—For the *Degree in Physics* it is necessary to have attended for two years the experiments in a physical laboratory, to have done for at least six months chemical experiments and to have pursued in equal numbers the courses in Rational Mechanics, Mathematical Physics, Mineralogy and one other course according to the General Regulations.

Art. 16.—For the *Degree in Chemistry* it is necessary to have attended for two years experimental studies in a chemical laboratory, to have done for at least six months practical experiments in Physics, and to have followed at least three courses in the Faculty of Science or in that of Medicine.

Art. 17.—For the *Degree in Natural Sciences* it is necessary to have cultivated for two years one of the branches of Natural History in one of the scientific institutions of the University, and to have followed an equal number of courses of Geology, Physical Geography (where it is taught), Zoology, Comparative Anatomy, and Physiology.

Art. 18.—The candidate will be admitted to the examination for one of the degrees on presenting (1) certificates of diligence for the courses indicated in the preceding Articles in conformity with the General Regulations, (2) an essay on a subject chosen indiscriminately from those which specially refer to the degree to which he aspires.

Art. 19.—The *examination* for the Degree consists: *For Mathematics:* (1) In a conference on the subject of the essay; (2) in an oral examination lasting at least an hour on the subjects studied by the candidate in the second two years. The commission can, after the conference indicated at No. 1, exclude the candidate from the oral examination. N.B. The Minister has consented that a short interval may intervene between the first and second attempts, in such a manner, however, that the unity of the examination is maintained, and incurs a single voting and not two, as in the case of an examination being divided in two sittings (Ministeral Note, 19th June, 1877). *For Physics, for Chemistry and for Natural Sciences:* Of a practical examination in Physics, Chemistry, or the branch of Natural History most studied by the candidate, the object and rules of which examination shall be fixed by the commission. (2) Of an oral examination lasting at least an hour not only on the subjects which refer to the practical examination, but also on others studied in the second two years.

Honorary Degrees.

These are only conferred in rare and particular cases where the distinction is held to be justified. The special provision on the subject is that "The Council of Public Instruction, subject to the approval of the Superior Council of Public Instruction, may recommend for nomination to the King persons who, by their labours, discoveries, or teachings, shall have acquired special celebrity in the subjects which they are to profess."

Private Instruction.

The professors in the several faculties are allowed to give private instruction in all the authorised courses; but it is provided (apparently somewhat ambiguously) that they must not repeat in private the teaching which they give in public. The right of instruction in the official programme is reserved to the authorised doctors. The courses taken privately have, however, the same academical value as those of the public classes, provided they be in accordance with the rules.

Schools of Obstetrics for Midwives.

Schools of Obstetrics for the instruction of women are permitted in association with the universities of their several districts; but it does not appear that such an association is at present effected. Schools of the kind are established in Milan, Venice, Aquila, Bari, Catanzaro, Novara, Vercelli, and Voghera, most of them attached to the local

lyceums (schools of secondary education); but they are not described as having complied with the conditions required. One of these is that such a school shall have a lying-in hospital of at least fifteen beds. Ladies practising Midwifery without a recognised qualification are eligible for the diploma on passing the practical examination prescribed.

Fees.

The following statement shows the University fees:

Jurisprudence: Matriculation fee, £1 12s.; entrance fee, £26 8s.; examination fee, £4; diploma fee, £2 8s.—total, £34 8s.

Faculty of Mathematics (Pure) and School of Application for Engineering.—Matriculation fee, £1 12s.; entrance fee, £26 8s.; examination fee, £4; diploma fee, £2 8s.—total, £34 8s.

Faculty of Physical, Natural, and Mathematical Science.—Matriculation fee, £1 12s.; entrance fee, £12; examination fee, £2; diploma fee, £2 8s.—total, £18.

Philosophy and Letters.—Matriculation fee, £1 12s.; entrance fee, £12; examination fee, £2; diploma fee, £2 8s.—total, £18.

Course for Notary and Procurator.—Matriculation fee, £1 4s.; entrance fee, £4; examination fee (biennial course), £2; diploma fee, 16s.—total, £8.

Course of Mensuration.—Matriculation fee, 16s.; entrance fee, £3 4s.; examination fee (quadrennial course), £1 14s.; diploma fee, 16s.—total, £6 10s.

Subsidies and Rewards.

Certain funds, in the nature of bursaries and scholarships, are set apart for the assistance of students and the reward of distinguished scholars. Students, for example, may procure a *dispensation from scholastic fees* on showing—first, that they are in need; and, next, on complying with certain other conditions prescribed. The following rules regulate the preparation of certificates for this purpose:

The certificate of the communal councils, according to the Ministerial circular of the 1st October, 1876, must contain the following information: (*a*) The name, age, and respective position of the parents of each person who composes the student's family, and of his sisters; if he be marriageable or married; (*b*) the profession, art, industry, or business exercised by each of the said persons; (*c*) the approximate income which each receives from the same; (*d*) the kind, the extension, the approximate value of goods which they possess, the capital employed, the receipts from each item; (*e*) the pensions, stipends, posts of study, or of maintenance in institutions of benevolence or instruction which they enjoy; (*f*) the fees by which they benefit. The certificate of the Registry Office must comprise the taxes paid by each member of the family, those paid in the place of domicile as well as those fees which are paid in his birthplace or another commune. Such certificates must be of recent date and near that of the presentation of the application, and in any case not older than a year.

Subsidies for Graduates are thus provided:

CHAP. V.—*Art.* 40.—Every scholastic year a competition will be open to all those on whom degrees have been conferred in the several universities of the kingdom for a subsidy intended to put them in a position to perfect themselves in their studies near a national or foreign university. The numbers of subsidies and the sum to be used in them for university students, as well as for others, will be fixed by the Minister year by year.

Art. 41.—Students obtaining the degree beyond the fourth year will not be admitted to the competition, neither can those compete for the subsidies who have not obtained the degree in less than one year.

Art. 42.—The competition shall be made by means of presentation for parties of the competitors according to the distinctions obtained in their studies. For the subsidies outside the application, the memorials and the honours must be asked for not later than the month of April; and for those inside, not later than the month of August.

Art. 43.—The honours of memorials will be adjudged by commissions nominated by the Minister. The commissions will propose to which of the competitors the subsidy shall be granted, and for what national or foreign university.

Art. 83.—There is still established in Naples a University scholarship, which is open to those scholars who, having completed their course, may be ordered to finish their studies in other European cities at the expense of the Government.

CHAPTER VI.

UNIVERSITY EDUCATION IN BELGIUM.

University of Gand: Faculties of Philosophy and Letters; of Science; of Law; of Medicine.

UNIVERSITY OF GAND.

THE University embraces the Faculties of Philosophy and Letters; Science—Mathematical, Physical, and Natural; Law; and Medicine.

Inscriptions.—These are of two kinds—the *inscription au rôle*, and the *inscription aux cours*. The student must take the former annually, paying a fee of 15fr. The second mentioned inscription is for all the courses of the student's curriculum, and the fee for the Legal Faculty is 250fr. per annum; for other Faculties 200fr, per annum.

Single courses may be taken at the University. There is a fixed fee for each course.

The *academical year* is divided into *two sessions*. The first commences the first Tuesday in October, and the second the last Monday in February.

Prizes, &c.—Gold medals are awarded annually. Added to each medal, value 400fr., are *books* to the same amount. These prizes are given by the Government. In addition eighty bursaries of the value of 400fr. each are given annually.

Two principal *degrees* are granted by the University—*Candidate* and *Doctor*. There is a third degree obtainable by those who have already graduated as Candidate in Pharmacy—*Pharmacien*.

No person is allowed to exercise a profession for the recognised practice of which a degree is required by the law, if he has not obtained the same degree conformably to the law. Nevertheless, the Government can accord special dispensations, more particularly in the case of foreign practitioners of Medicine.

Faculty of Philosophy and Letters.

Examination for the Degree of Candidate—in one or two Proofs, at the

Student's Option.—The *first proof* comprises: History of the Middle Ages, Ancient History, Political History, Roman Antiquities. The *second proof* comprises: Latin translation, History of French or Flemish Literature, Moral Philosophy and Logic, Psychology, Political and Belgian History. In addition, Greek is compulsory on all those who aspire to the degree of Doctor in Philosophy.

The *examination for the Doctorate* may also be taken on one or two proofs. The subjects are: Latin, Greek, Philosophy, Ancient and Modern History, General Grammar, Comparative History of Modern European Literature.

Faculty of Law.

There is one examination for the degree of *Candidate*. *Subjects*: History and Institutes of Roman Law, Natural Law and Philosophy of Law, Encyclopædia of Law, and Historical Introduction to the course of Civil Law.

The *examination for the Doctorate* is of a more advanced character.

Faculty of Sciences.

The *Candidate's degree* may be taken in one or two proofs. The *first* comprises: Logic, Psychology, Moral Philosophy, complete Analytical Geometry, Higher Algebra, Differential and Integral Calculus, Experimental Physics. The *second* proof comprises: Descriptive Geometry, Chemistry, Crystallography.

The examination for the *Doctorate* embraces; Higher Mathematics, Theoretical and Applied, Physics, &c.

Candidate in Natural Sciences.—The examination is in one or two proofs, at the candidate's option. *First proof*: Logic, Psychology, Moral Philosophy, Experimental Physics, Zoology, General Chemistry (Inorganic). *Second proof*: Experimental Physics, Organic Chemistry, Botany, Mineralogy and Geology, Practical Chemistry.

Degree of Doctor in Natural Sciences.—There are one or two proofs, at the candidate's option. The *first proof* embraces three of the following subjects: 1. Zoology, Animal Geography and Palæontology, Histology, Comparative Anatomy and Physiology; 2. Botany, General and Special, including Vegetable Geography and Palæontology; 3. Mineralogy, Geology, and Stratigraphical Palæontology; 4. General and Analytical Chemistry. *Second proof*: on the subjects omitted in the first. The examination is partly practical.

Fees.—Examination of Candidate in Philosophy and Letters, 50fr.; examination of Doctor in Philosophy and Letters, 50fr.; examination of Candidate in Law, 100fr.; each of the examinations of Doctor in Law, 100fr.; examination of Candidate in History, 100fr.; each exami-

nation for Candidate in Sciences, 40fr.; examination for Doctor in Physical and Mathematical Sciences, 40fr.; examination of Doctor in Natural Sciences, 80fr.

Examinations are also held for *Scientific diplomas*—that is, for diplomas which do not confer a right to practice in Belgium. They are granted in the same Faculties and have the same titles as the ordinary diplomas. *Special scientific diplomas* are also granted after examination to persons who, having already obtained the degree of Doctor, have applied themselves to some particular branch of science. Full particulars may be obtained from the Secretary.

Regulations of the Schools of Civil Engineering, Arts and Manufactures, attached to the University.

For each of the above schools there is a Preparatory and a Special or Advanced department. The School of Civil Engineering comprises the two sections: 1st, Bridges and Roads, and 2nd, Civil Engineering proper. The section of Bridges and Roads is intended for students studying for the diplomas of Honorary Engineer of Bridges and Roads, and Honorary Conductor of Bridges and Roads. In the corps of Bridges and Roads the appointments of sub-engineer and conductor of the third class are reserved for Engineers and Conductors of Bridges and Roads. In the administration of the Railways, the appointments of sub-engineer and sub-chief of section are also reserved for the same grade.

The *Section of Civil Engineering* is intended for students aspiring to the diplomas of—Civil Engineer, Architectural Engineer, Conductor of Civil Constructions for those who desire to acquire a knowledge of the science of Civil Engineering.

The *School of Arts and Manufactures* is intended for those who aspire to the diploma of Industrial Engineer, or who desire to acquire a knowledge of manufacturing processes.

The *School of Civil Engineering* is open to foreigners as well as to Belgians.

The *C.E. Preparatory School.—Section of Bridges and Roads.*—The examinations for admission take place each year at the commencement of October. Candidates must present themselves at the School at least one hour before the commencement of the examination. The examination fee is 30fr.; candidates pay another 2fr. for the diploma, and 3fr. to the hall porter. *Duration of the Studies*: At the Preparatory School (Bridges and Roads section) the curriculum is of two years' duration. The courses open about the middle of October. The *courses and exercises* are as follow: *First year of study*: Analytical

Geometry, Higher Algebra and Elements of the Theory of Determinants, Descriptive Geometry, Differential and Integral Calculus, Analytical Statics, Experimental Physics, Elements of Mathematical Physics, Constructive Exercises, Practical Drawing as applied to Engineering. *Second year of study*: Applications of Descriptive Geometry—Integral Calculus, Elements of Differential Calculus and of Variations; Dynamics, Analytical Mechanics, Hydrostatics, Hydrodynamics, General Chemistry; Astronomical Physics and Elements of Géodésie; Elements of Architecture; Study of Machinery; Calculation of Probabilities; Practical Exercises; Practical Drawing as applied to Engineering.

Temporary Division.—A temporary division is established for students unacquainted with Spherical Trigonometry, Analytical Plane Geometry, and the Elements of Descriptive Geometry. The teaching given in this division is so conducted that pupils can terminate their preliminary studies in one year, after which they submit to the examination for admission into the Preparatory School.

Exemption from Admission Examination.—The Director of the School may grant special permission to persons to attend one or more courses without passing an Entrance examination. The answers of the pupils in the ordinary tutorial examinations are taken into account in connection with the granting of diplomas.

Fees.—The sum to be paid for the general inscription for all the courses is 200fr. each year. The fee paid by pupils admitted to the temporary division includes that for the first year of study in the Preparatory School. Admitted pupils pay annually 25fr. for repetitions &c.; pupils of the second year pay in addition 20fr. for laboratory work.

Inscriptions, &c.—The examinations take place each year at the commencement of October. Candidates must present themselves an hour before the examination commences. The examination fee is 30fr. Candidates also pay 2fr. for the diploma, and 3fr. to the hall porter.

The *curriculum* is of two years' duration. The courses commence in October. They are as follow: *First year*; Principles of and Exercises in Analysis; Descriptive Geometry; Analytical Statics; Experimental Physics; Practical Exercises in Construction, Drawing, &c. *Second year*: Applications of Descriptive Geometry; Elementary Analysis; Dynamics, Hydrostatics, and Hydrodynamics; Elements of Chemistry; Elements of Architecture; Elements of Machinery; Practical Exercises (as above). The *fees* are as for the Preparatory division.

Special School of Civil Engineering.

The following classes of pupils are educated here: Bridge and Road

Engineers, Civil Engineers, Architectural Engineers, and Conductors of Civil Constructions.

Section of Bridges and Roads (comprising two Classes of Pupils—Pupil Engineers and Pupil Conductors).—Candidates for admission must be between eighteen and twenty-five years of age. *Pupil Engineers*: The examination for admission is divided into two parts. Between passing the first and submission to the second, a greater interval than two years cannot be allowed. Each examination is on the subjects forming the teaching of each of the two years of study of the Preparatory school. *Pupil Conductors*: The examination for admission embraces: Arithmetic, Algebra to equations of the second degree inclusive; Elementary Geometry; Plane Trigonometry; the French or Flemish Languages; Designing. *Curriculum*: For Pupil Engineers, three years; for Pupil Conductors, two years. *Fees*: Candidate Conductors: First examination, 20fr.; second, 30fr.; third, 50fr. Candidate Engineers: First examination, 30fr; second, 30fr.; third, 50fr,; fourth, 50fr.; fifth, 50fr.

Section of Civil Engineering (comprising Pupil Civil Engineers, Pupil Architectural Engineers, and Pupil Conductors of Civil Constructions).—For admission under the first two headings, the *examination subjects* are: Descriptive Geometry; the Calculus, Differential and Integral; Analytical Mechanics; Experimental Physics; Elements of Architecture; Elements of Machinery; Design; French. For admission under the third heading the *examination* comprises: Arithmetic, Elementary Algebra, Geometry, Plane Trigonometry, the French or Flemish Languages; Design, &c. The *fees* for the admission examination are: Pupil Civil Engineers, and Pupil Architectural, 30fr.; Pupil Conductors, 20fr.; for the diploma, 2fr. is charged, and 3fr. for the hall porter. The duration of the *curriculum* is two years. The *annual fees* are: Pupil Engineers, 150fr.; Pupil Conductors, 100fr.; Pupil Civil Engineers, and Pupil Architectural, 35fr.; Pupil Conductors of Civil Constructions, 25fr.

CHAPTER VII.

SWISS UNIVERSITIES AND FACULTIES.

University of Geneva—University of Basel—the Legal Faculty of Bern—the Philosophical Faculty of the High School of Bern.

UNIVERSITY OF GENEVA.

THERE are two sessions in each year. The winter session commences on October 15th, ending on March 22nd; and the summer session commences on April 1st, ending on the 1st July.

At the commencement of their studies students must matriculate at the bureau of the University in the Faculty which they have chosen. Candidates must submit their certificates to the approbation of the Dean of the Faculty concerned. Students must have their names inscribed each session in the University books, and for each course which they propose to follow in the session must pay a fee at the rate of 2fr. 50c. for each hour of instruction given in each week.

In order to obtain a University degree it is not necessary to reside at Geneva.

Are admitted to matriculate in the Faculty of Sciences, in that of Letters, and in the section of Philosophy: 1. Bacheliers ès Lettres; 2. Persons who produce diplomas or certificates equivalent to the above; 3. Persons who successfully pass an oral examination conducted at the University. This last may be, at the candidate's option, either in the subjects of the oral division of the examination for the Baccalauréat ès Lettres, or on the following matters: 1st, Literature; 2nd, General History; 3rd, Philosophy; 4th, Physical Geography; 5th, Elementary Mathematics; 6th, Elements of the Natural Sciences; 7th, Elements of Physics and of Chemistry.

Law and Theology.

Are admitted as students of the above Facultie : 1st, Bacheliers ès Sciences and Licenciés ès Lettres; 2nd, Holders of the degree of Bachelier-ès-Lettres and of foreign diplomas, &c., in so far as their certificates are equivalent to the examination for Matriculation.

For the Faculty of Theology candidates must have an acquaintance with the Hebrew tongue. The examinations are public. The examinations for admission and graduation take place at the commencement of each academical year. The degrees conferred by the University are: 1st, Bachelier-ès-Lettres; Bachelier-ès-Sciences Physiques et Naturelles, Bachelier-ès-Sciences Mathematiques, Bachelier-ès-Sciences Médicales, Bachelier en Théologie; 2nd, Licencié-ès-Lettres, ès Sciences Sociales; en Droit; en Théologie; 3rd, Docteur-ès-Lettres; ès Sciences Physiques; ès Sciences Naturelles; ès Sciences Mathematiques; en Droit; en Théologie; en Médecine. The acquisition of the degrees of Bachelier-ès-Sciences and of Bachelier-ès-Lettres gives a right to a diploma of Maître-ès-Arts.

Examinations.

For the Baccalauréat-ès-Lettres.—The examination is written and oral. The oral division embraces: Greek, Latin, Ancient History Literature and History of the French Tongue, History, Logic, Elementary Physical and Natural Science, Elementary Mathematics, German (not demanded of foreigners). The written division embraces: A Latin Thesis, Greek and Latin Translation, German Thesis and Translation, French Composition.

For the Licence ès Lettres and Licence ès Sciences Sociales.—The examination is oral and written. Candidates for the first degree should be Bachelors in Science of two years' standing. The oral examination comprises: Latin, French, German, History of Philosophy, General History, Comparative Literature. The written part embraces: Latin Prose Composition, French Prose Composition, Latin Verse Composition, Greek Thesis. Candidates for the second-named degree must be Bacheliers-ès-Lettres or possess equivalent certificates, &c. The oral examination for this Licence is on: The History of Philosophy, the History of Religions, the History of Literature, the History of Art, Philosophy, &c.; Political Economy and Statistics. The written part comprises: History (General and Swiss); History of Civilisation and the Philosophy of History; Constitutional Law; Comparative Law and the study of the Social Systems. The Doctorat-ès-Lettres can be obtained only by Licenciés-ès-Lettres.

The Baccalauréat ès Sciences.—First Baccalauréat ès Sciences Mathématiques. Subjects: Oral division: Mathematics, Astronomy, Physical Geography, Physics, Inorganic Chemistry, Mineralogy, Mechanics. *Written division*: Mathematics, including the Differential and Integral Calculus, Descriptive Geometry, Astronomy, Physics. *Second Baccalauréat ès Sciences Physiques et Naturelles.*—The *oral part* comprises: Physics, Chemistry, Mineralogy, Palæontology, Geology,

Botany, Zoology, Comparative Anatomy. The subjects of the *written part* are: Physics, Chemistry, Botany, Zoology, and Comparative Anatomy, Geology.

The examination for the *Doctorat ès Sciences* is the same as for the Baccalauréat with regard to range of subjects. The standard, however, is of course higher. Candidates are not required to have taken a previous degree in the University.

Licence en Droit.—Candidates must either pass the first three annual examinations of the University required for this degree; or must pass a special Preliminary equivalent to these three. In special cases this rule may be dispensed with. The examination for the Licence is oral and written. Candidates for the Doctorat en Droit must have previously obtained the Licence.

Baccalauréat en Théologie.—Are admitted to the examination for this degree: Matriculated students in the Faculty, those presenting equivalent certificates. The *examination* is oral and written. Candidates for the Licence en Théologie must have obtained the Baccalauréat.

University of Basel.

Regulations for the Examinations of the Faculty of Philosophy.

The candidate informs the Dean of the subjects in which he wishes to be examined, and presents to him a short sketch of his educational career (*curriculum vitæ*) in Latin or German, and a scientific Thesis.

For the *oral examination* the following are the regulations viz.: The candidate will be examined in three subjects of his own choosing. These subjects are: (*a*) In the Department of History and Philology: (1) Philosophy (Historical or Systematic); (2) Comparative Science of Language; (3) Greek Language and Literature; (4) Latin Language and Literature; (5) German Language and Literature; (6) Romance Languages and Literature; (7) Oriental Languages and Literature (8) History; (9) Political Economy and Statistics; (10) Archæology and the History of Arts. The candidate in the Department of History and Philology must give proof of his knowledge of the two classic tongues, should he not have chosen these as subjects of examination, either by a valid maturitätszeugniss, or when he cannot produce such, by an examination. (*b*) In the Department of Mathematics and Natural History: (1) Philosophy (Historical or Systematic); (2) Mathematics; (3) Physics; (4) Chemistry; (5) Mineralogy; (6) Botany; (7) Zoology; (8) Political Economy and Statistics. The candidate can select two subjects from the department on which his thesis has been written, and one subject from the other department. The entire Faculty decides as to the result of the examination; the division according to

merit is as follows: (1) *Summa cum laude*; (2) *Insigni cum laude*; (3) *Magna cum laude*; (4) *Cum laude*; (5) Judgment not given (*ohne urtheil*). The promotion to the degree is a public ceremony. This is prefaced by a short speech from the Dean; after which the candidate is offered the choice of a public debate, or a speech in Latin or German. Finally he takes the oath, and the degree is conferred. The diploma may also be given immediately after the examination, *in sessione*, when the candidate may be sworn in by the Dean and receive the diploma. The examination *fees*, exclusive of the cost of printing, amount to 300fr., which must be deposited with the beadle. Should the candidate fail to pass, half the fees will be returned.

The Legal Faculty.

Subjoined are the Regulations concerning the Degree of this Faculty:

1. The candidate must send into the Dean certificates that he has pursued the necessary studies, and a *curriculum vitæ*. The application must be accompanied by an original Thesis in German or Latin on some legal subject chosen by the candidate.

2. The Dean places these documents before the Fellows of the Faculty, who decide whether or not the candidate will be permitted to enter for examination.

3. If the admission of the candidate is decided upon, four problems are chosen by the Faculty, which the candidate must solve in writing. These will be selected, according to the judgment of the Faculty, from the Roman and German Law, from the Criminal Law, the German Civil Law, or the Canonical Law.

4. Candidates are allowed four weeks to answer the questions, on the understanding that the time cannot be prolonged or new questions set except for most urgent reasons. From the commencement of the examination the Dean and Fellows preside in turn.

5. The Dean appoints a day for oral examination, which examination will comprise the subjects mentioned in Section 3, as well as General or German National Law.

6. The successful candidates are classed: (1) *Summa cum laude*; (2) *magna cum laude*; (3) *cum laude*; (4) *légitime*.

7. The Faculty can confer the Degree without examination on a lawyer of eminence who sends in a Thesis, which he states, on his word of honour, to be of his own composition.

8. The *fees*, including the cost of printing the diploma, amount to 378 francs 70 centimes.

9. 100 francs will be returned to unsuccessful candidates.

Theological Faculty.

The Regulations concerning the degree of *Licentiate* are:

1. The bestowal of the degree of Licentiate pre-supposes that the candidate has the intention of taking Holy Orders. A distinction between candidates *in loco* and *in absentia* is not admissible.

2. The degree, *honoris causa*, may be conferred in two ways: either the Faculty may confer it spontaneously upon a distinguished scholar, in which case of course there are no fees charged; or the Faculty may dispense with the examinations on the application of a candidate whose literary achievements are known.

3. To obtain the degree by examination, the candidate must send in a written application, a *curriculum vitæ* in Latin, certificates that he has passed the necessary examinations in Theology, and lastly (should the applicant be unknown to the Faculty) a certificate of good moral character.

4. The candidate having sent in these documents, his admission to examination rests with the Faculty.

5. Should the candidate already have a reputation as a writer, the Faculty may relieve him of the necessity of writing a thesis, which would otherwise be necessary.

6. After the thesis has been approved of, the applicant must defray the cost of printing.

7. He is then subjected to an oral examination, which must occupy not less than two hours, and include all Theological subjects. Only the examination in Practical Theology can be dispensed with, at the candidate's wish, on his stating that he does not intend to devote himself to that branch.

8. An examiner is appointed by the Faculty for each of the following chief Departments: (*a*) Old Testament, Exegesis and Theology; (*b*) New Testament, Exegesis and Theology; (*c*) Church History and the History of Dogmas; (*d*) Divinity and Ethics; (*e*) Practical Theology. To each of these Departments a half-hour must be devoted, and the other members of the Faculty have the right to ask a few questions of the candidate.

9. The candidate before the examination must select one of the subjects mentioned in Section 8 as his speciality. This will form the chief subject of examination.

10. Should it be, by exception, the candidate's intention not to take Holy Orders, he must distinctly state so in his application. In this case the examination will be more general.

11. The *fees* amount to 800 francs, including 5 francs for the beadle, and 150 francs of the sum must be paid in advance. Should the candidate be rejected after the Thesis, two-thirds of the *fees* will be returned; if after the Oral, one-third.

The Legal Faculty of Bern.

The regulations concerning the degree of *Doctor* are:

1. With the application must be enclosed: 1. An original Thesis on Legal Science, written or printed in Latin, German, French, or Italian. (2) A His-

tory of the candidate's career written in the same language as the Thesis. (3) Certificates that he has pursued the necessary studies.

2. Should the Thesis be satisfactory, the Dean will hand to the candidate the list of subjects chosen by the professors in ordinary for the independent work, which must be completed within eight days.

3. The written and oral examinations include: (1) Pandects. (2) One of the following groups of subjects: Group I.: (*a*) German or French Private Rights, with Commercial Law; (*b*) German or French Civil Process; (*c*) State Law; (*d*) Penal Law and Penal Process. Group II.: (*a*) Philosophy of Law or Encyclopædia of Law; (*b*) General and Particular State Law; (*c*) International Law; (*d*) Ecclesiastical Law, or Penal Law and Penal Process. Group III.: (*a*) General and Particular State Law; (*b*) Science of National Economy; (*c*) The Politics of National Economy (Police); (*d*) The Science of Finance. And also: a written examination on a subject taken from the Pandects, and in two of the subjects from the group selected by the candidate; an oral examination on the Pandects and all the subjects of the said group.

4. Should the candidate pass the Written examination he will be permitted to enter for the Oral, which is conducted by the professors of the various subjects of examination. Should there be more than one professor of a subject, each is entitled to take part in the examination.

5. The oral examinations are held openly in the university building; the place, day, and hour are announced several days before by the Dean on the black board. The examination on the Pandects last half an hour; on the other subjects together, one hour and a half. At least three Fellows of the Faculty must be present, and in voting the result all present must take part.

6. Should the candidate satisfy the Faculty as to his proficiency in legal knowledge he will receive the degree of Doctor *juris utriusque*, with the note—*summa cum laude*, or *magna cum laude*. For the first of these (*summa cum laude*) the votes of two-thirds of the Fellows of the Faculty are necessary. Rejected candidates are not permitted to present themselves for re-examination until six months have elapsed.

7. The whole or part of the oral examination may be omitted in the case of candidates who have passed the examination of the Cantons or other similar examination.

8. The diploma will be conferred so soon as a hundred copies of the Thesis have been printed and distributed.

9. The Faculty can, by an unanimous vote, confer the degree *honoris causa* upon men distinguished in legal or political science.

10. The *fees* amount to 300 francs; and half will be returned to candidates who fail to pass. Should the candidate be re-examined, he must pay 150 francs. If the candidate answer with distinction one of the prize questions set by the Faculty, half the fees may be returned to him. The degree of Doctor *honoris causa* is free of cost.

Philosophical Faculty of the High School of Bern.

The regulations concerning the degree of *Doctor* are :

1. The application for admission to the degree of Doctor of the Philosophical Faculty is made in writing to the Dean.

2. The necessary documents to be sent in are: (*a*) A Thesis in Latin when the studies of the candidate have included Classics; in Latin, or other language if preferred, when his studies have embraced Philosophy, History, Mathematics, Physics, and Natural History. (*b*) A history of the candidate's life, in which especially must be stated the complete extent of his studies: this must be written in the same language as the thesis. (*c*) Certificates of morality and education. (*d*) The half of the sum which, according to Article 11 of the Rules of Feb. 15, 1869, must be paid for the bestowal of the degree of M.D.; this is fixed at 290 francs, and the sum to be prepaid is therefore 145 francs.

3. The Philosophical Faculty divides examinations for degree of Doctor into two sections; the first including Philosophy and History, the second Mathematics, Physics, and Natural History. Always according as the education of the candidate inclines him more to one or the other of these two sides, he chooses three subjects in which he wishes to be examined, and one of the same as chief subject; but Philosophy is necessary for every examination, and a knowledge of Latin sufficient to enable him to read the works written in that tongue on his chosen subjects. In the Natural Science Section two of its members, by command of the College, add examinations in Latin and Philosophy to its own examinations in Natural Science.

4. Professors are appointed examiners in the subjects which they teach. If nevertheless there are several professors of the same subject in the University, they appoint one or more examiners from among themselves.

5. At the oral examination three science questions approved by the Faculty are put before the candidate, which he must answer in writing without assistance. He will be allowed three hours' time to answer these questions. The professor who asked the question sends in a report upon the answers, upon which the Faculty come to a decision.

6. The judgment upon the oral examination, at which half an hour is spent on each subject, is given at the meeting of the Faculty, first by the professors who have examined, and then by the other professors who were present at the examination. If the majority of the decisions are favourable the degree of Doctor is conferred.

7. If the majority of decisions are in favour of the candidate he must pay the remaining half (145 francs) of the sum requisite for the bestowal of the rank of Doctor; after which the diploma of Doctor will be handed to him so soon as his thesis is printed and the Faculty supplied with 100 copies. Should the majority of votes not be in the candidate's favour he will be rejected, and will not be allowed to present himself for re-examination for at least half a year. He does not receive back again the money (145fr.) he has already paid. Nevertheless,

should he present himself for re-examination he will not be obliged to pay any more money until he has successfully passed.

8. It remains at the discretion of the candidate to resign the right of defending in a public discussion his Thesis or some other well-known essay.

9. Should the candidate decide in favour of a public discussion, the Faculty must nominate a president, who will at the same time act as promoter. The candidate seeks opponents and decides upon the language in which he will debate; should, however, the subject be Classical, the Latin language must be used.

10. The formula which the Dean at the end of the examination, when the diploma is to be bestowed, repeats to the candidate before the assembled Faculty, or the promoter at the end of the debate before the assembled public, runs thus: "By reception of the degree of Doctor of Philosophy you vow always to advance science, to which you devote yourself, as much as lies in your power, and to maintain its dignity; you promise to protect the University of Bern, and especially the Faculty of Philosophy, from all harm, and to forward its interests as much as possible."

11. The Faculty of Philosophy reserves to itself the right of bestowing the degree of Doctor of Philosophy *honoris causa* on men distinguished by their learning and public services.

SECTION IV.

THE UNITED STATES.

CHAPTER I.

HIGHER EDUCATION IN THE UNITED STATES.

Honorary Degrees—Summary of Degrees Conferred—Chief American Universities and Colleges.

ACCORDING to the Report of the United States Commissioner of Education for the year 1879—

The conferring of honorary degrees without due consideration has tended to detract somewhat from the value of American degrees. The fraudulent and disgraceful proceedings connected with the sale of spurious diplomas have had a similar effect. The thorough exposure of this base imposition will do much to vindicate the character of our superior instruction, and the leading universities and colleges are taking efficient measures to restore and preserve the full significance of their honours. Many colleges now require an examination for the degree of M.A., and the degree of Ph.D. has been introduced and is in most instances bestowed on examination only, though it occasionally appears among honoraries.

The same Report shows a "Statistical Summary of all Degrees Conferred," from which it appears that the grand totals in all classes were: In course, 10,261; honorary, 469. These are distributed over the various faculities thus: *Letters*—in course, 3765; honorary, 159. *Science*: In course, 928; honorary, 5. *Philosophy*: In course, 263; honorary, 35. *Arts*: In course, 32; honorary, 2. *Theology*: In course, 194 (with 419 graduates, upon whom in most cases diplomas were conferred); honorary, 149. *Medicine*: In course, 3587; honorary, 13. *Law*: In course, 1204; honorary, 106. *Unspecified*, 288. This distribution of numbers includes 727 degrees conferred in colleges for women, of which 573 were in Letters, 30 in Science, 18 in Arts, and 106 not specified. Thus far the total numbers and their distribution in faculties. The respective shares of the various States of the Union are thus given: *Alabama*: In course, 109; honorary, 13. *Arkansas*; In course, 10; honorary, 1. *California*: In course, 149; honorary, 3. *Colorado*:

None. *Connecticut*: In course, 317; honorary, 30. *Delaware*: In course, 14; honorary, 5. *Florida*: None. *Georgia*: In course, 217; honorary, 7. *Illinois*: In course, 641; honorary, 24. *Indiana*: In course, 238; honorary, 11. *Iowa*: In course, 397; honorary, 20. *Kansas*: In course, 33; honorary, 2. *Kentucky*: In course, 420; honorary, 5. *Louisiana*: In course, 99; honorary, 5. *Maine*: In course, 118; honorary, 9. *Maryland*: In course, 249; honorary, 5. *Massachusetts*: In course, 847; honorary, 26. *Michigan*: In course, 550; honorary, 24. *Minnesota*: In course, 57; honorary, none. *Mississippi*: In course, 63; honorary, 4. *Missouri*: In course, 486; honorary, 23. *Nebraska*: In course, 6; honorary, none. *Nevada*: None. *New Hampshire*: In course, 114; honorary, 21. *New Jersey*: In course, 326; honorary, 7. *New York*: In course, 1470; honorary, 52. *North Carolina*: In course, 84; honorary, 12. *Ohio*: In course, 837; honorary, 43. *Oregon*: In course, 27; honorary, none. *Pennsylvania*: In course, 984; honorary, 34. *Rhode Island*: In course, 73; honorary, 5. *South Carolina*: In course, 76; honorary, 6. *Tennessee*: In course, 531; honorary, 26. *Texas*: In course, 65; honorary, 4. *Vermont*: In course, 94; honorary, 14. *Virginia*: In course, 230; honorary, 13. *West Virginia*: In course, 56; honorary, 5. *Wisconsin*: In course, 133; honorary, 6. *District of Columbia*: In course, 141; honorary, 4.

List of Chief American Universities and Colleges.

Southern Univ., Greensboro', Ala. (M. E. South).
Howard Coll. Marion, Ala. (Baptist).
Spring Hill Coll., Near Mobile, Ala. (R.C.).
Univ. of Alabama, Tuscaloosa, Ala. (Non-sect.).
Arkansas Coll., Batesville, Ark. (Presbyterian).
Cane Hill Coll., Boonsboro', Ark. (Cumb. Presb.).
Arkansas Industrial Univ., Fayetteville, Ark. (Non-sect).
Judson Univ., Judsonia, Ark. (Baptist).
St. John's Coll. of Arkansas, Little Rock, Ark. (Non-sect.).
Missionary Coll. of St. Augustine, Benicia, Cal. (P.E.).
Univ. of California, Berkeley, Cal. (Non-sect.).
Pierce Christian Coll., College City, Cal. (Christian).
St. Vincent's Coll., Los Angeles, Cal. (R.C.).
St. Ignatius Coll., San Francisco, Cal. (R.C.).
St. Mary's Coll., San Francisco, Cal. (R.C.).
Santa Clara Coll., Santa Clara, Cal. (R.C.).
Univ. of the Pacific, Santa Clara, Cal. (M.E.).
Pacific Methodist Coll., Santa Rosa, Cal. (M. E. South).
California Coll., Vacaville, Cal. (Baptist).
Washington Coll., Washington, Cal. (Non-sect.).
Hesperian Coll., Woodland, Cal. (Christian).
Univ. of Colorado, Boulder, Colo. (Non-sect.).
Colorado Coll., Colorado Springs, Colo. (Non-sect.).
Trinity Coll., Hartford, Conn. (P.E.).
Wesleyan Univ., Middletown, Conn. (M.E.).
Yale Coll., New Haven, Conn. (Non-sect.).
Delaware Coll., Newark, Del. (Non-sect.).
Univ. of Georgia, Athens, Ga. (Non-sect.).
Atlanta Univ., Atlanta, Ga. (Non-sect.).
Bowdon Coll., Bowdon, Ga. (Non-sect.).
Gainesville Coll., Gainesville, Ga. (Non-sect.).
Mercer University, Macon, Ga. (Baptist).
Fio Nono Coll., Macon, Ga. (R.C.).
Emory Coll., Oxford, Ga. (M. E. South).
Abingdon Coll., Abingdon, Ill. (Christian).
Hedding Coll., Abingdon, Ill. (M.E.).
Illinois Wesleyan Univ., Bloomington, Ill. (Methodist).
St. Viateur's Coll., Bourbonnais Grove, Ill. (R.C.).
Blackburn Univ., Carlinville, Ill. (Presb.).
Carthage College, Carthage, Ill. (Lutheran).
St. Ignatius Coll., Chicago, Ill. (413, West Twelfth-street) (R.C.).
Univ. of Chicago, Chicago, Ill. (Baptist).
Rock River Univ., Dixon, Ill. (Non-sect.).
Eureka Coll., Eureka, Ill. (Christian).
Coll. of Individual Instruction, Evanston, Ill. (Non-sect.).
Northwestern Univ., Evanston, Ill. (M.E.).
Ewing Coll., Ewing, Ill. (Baptist).
Knox Coll., Galesburg, Ill. (Non-sect.).
Lombard Univ., Galesburg, Ill. (Universalist).
Illinois Coll., Jacksonville, Ill. (Non-sect.).
Lake Forest Univ., Lake Forest, Ill. (Presb.).
McKendree Coll., Lebanon, Ill. (M.E.).
Lincoln Univ., Lincoln, Ill. (Cumb. Presb.).
Evangelisch-Lutherisches Coll., Mendota, Ill. (Lutheran).
Monmouth Coll., Monmouth, Ill. (United Presb.).
Mt. Morris Coll., Mt. Morris, Ill. (Brethren).
Northwestern Coll., Naperville, Ill. (Evang.).
Augustana Coll., Rock Island, Ill. (Evang. Lutheran).

LIST OF CHIEF AMERICAN UNIVERSITIES—(*continued*).

St. Joseph's Ecclesiastical Coll., Teutopolis, Ill. (R.C.).
Shurtleff Coll., Upper Alton, Ill. (Baptist).
Illinois Industrial Univ., Urbana, Ill. (Non-sect.).
Westfield Coll., Westfield, Ill. (Untd. Brethrn.).
Wheaton Coll., Wheaton, Ill. (Non-sect.).
Bedford Coll., Bedford, Ind. (Christian).
Indiana Univ., Bloomington, Ind. (Non-sect.).
Wabash Coll., Crawfordsville, Ind. (Presb.).
Concordia Coll., Fort Wayne, Ind. (Evang. Lutheran).
Fort Wayne Coll., Fort Wayne, Ind. (M.E.).
Franklin Coll., Franklin, Ind. (Baptist).
Indiana Asbury Univ., Greencastle, Ind. (M.E.).
Hanover Coll., Hanover, Ind. (Presbyterian).
Hartsville Univ., Hartsville, Ind. (United Brethren).
Butler Univ., Irvington, Ind. (Christian).
Union Christian Coll., Merom, Ind. (Christian).
Moore's Hill Coll., Moore's Hill, Ind. (M.E.).
Earlham Coll., Richmond, Ind. (Friends).
Ridgeville Coll., Ridgeville, Ind. (F. W. Baptist).
St. Meinrad's Coll., St. Meinrad, Ind. (R.C.).
Amity Coll., Coll. Springs, Iowa (Non-sect.).
Griswold Coll., Davenport, Iowa (P.E.).
Norwegian Luther Coll., Decorah, Iowa (Lutheran).
Univ. of Des Moines, Des Moines, Iowa (Baptist).
St. Joseph's Coll., Dubuque, Iowa (R.C.)
Parsons Coll., Fairfield, Iowa (Presbyterian).
Upper Iowa Univ., Fayette, Iowa (Meth. Epis.).
Iowa Coll., Grinnell, Iowa (Congregational).
Simpson Centenary Coll., Indianola, Iowa (M.E.).
State Univ. of Iowa, Iowa City, Iowa (Non-sect.).
German Coll., Mt. Pleasant, Iowa (M.E.).
Iowa Wesleyan Univ., Mt. Pleasant, Iowa (Methodist).
Cornell Coll., Mt. Vernon, Iowa (M.E.).
Oskaloosa Coll., Oskaloosa, Iowa (Christian).
Penn Coll., Oskaloosa, Iowa (Friends).
Central Univ. of Iowa, Pella, Iowa (Baptist).
Whittier Coll., Salem, Iowa (Friends).
Tabor College, Tabor, Iowa (Congregational).
Western Coll., Western, Iowa (Untd. Brethren).
St. Benedict's Coll., Atchison, Kans. (R.C.).
Baker Univ., Baldwin City, Kans. (M.E.).
Highland Univ., Highland, Kans. (Presb.).
Univ. of Kansas, Lawrence, Kans. (Non-sect.).
Lane Univ., Lecompton, Kans. (Untd. Breth.).
Ottawa Univ., Ottawa, Kans. (Baptist).
St. Mary's Coll., St. Mary's, Kans. (R.C.).
Washburn Coll., Topeka, Kans. (Congregatnl.).
St. Joseph's Coll., Bardstown, Ky. (R.C.).
Berea Coll., Berea, Ky. (Non-sect.).
Cecilian Coll., Cecilian, Ky. (R.C.).
Centre Coll., Danville, Ky. (Presbyterian).
Eminence Coll., Eminence, Ky. (Christian).
Kentucky Military Institute, Farmdale, Ky. (Non-sect.).
Georgetown Coll., Georgetown, Ky. (Baptist).
Kentucky Univ., Lexington, Ky.
Kentucky Wesleyan Coll., Millersburg, Ky. (Methodist).
Murray Male and Female Institute, Murray, Ky. (Non-sect.).
Concord Coll., New Liberty, Ky. (Baptist).
Kentucky Classical and Business Coll., North Middletown, Ky. (Christian).
Bethel Coll., Russellville, Ky. (Baptist).
St. Mary's Coll., St. Marys, Ky. (R.C.).
Louisiana State Univ. and Agricultural and Mechanical Coll., Baton Rouge, La. (Non-sect.).
Jefferson Coll. (St. Mary's), Convent, La. (R.C.).
St. Charles Coll., Grand Coteau, La. (R.C.).
Centenary Coll. of Louisiana, Jackson, La. (M. E. South).
Leland Univ., New Orleans, La. (Baptist).
New Orleans Univ., New Orleans, La. (M.E.).
Straight Univ., New Orleans, La. (Congregtnl.).
Bowdoin Coll., Brunswick, Me. (Congregational).
Bates Coll., Lewiston, Me. (F. W. Baptist).
Colby Univ., Waterville, Me. (Baptist).
St. John's Coll., Annapolis, Md. (Non-sect.).
Baltimore City Coll., Baltimore, Md. (Non-sect.).
John Hopkins Univ., Baltimore, Md. (Non-sect.).
Loyola Coll., Baltimore, Md. (R.C.).
Washington Coll., Chestertown, Md. (Non-sect.).
Rock Hill Coll., Ellicott City, Md. (R.C.).
St. Charles's Coll., Ellicott City, Md. (R.C.).
Frederick Coll., Frederick, Md. (Non-sect.).
Western Maryland Coll., Westminster, Md. (Methodist Protestant).
Amherst Coll., Amherst, Mass. (Congregatnl.).
Boston Coll., Boston, Mass. (R.C.).
Boston Univ., Coll. of Liberal Arts, Boston, Mass. (M.E.).
Harvard Coll., Cambridge, Mass. (Non-sect.).
Tufts Coll., College Hill, Mass. (Universalist).
Williams Coll., Williamstown, Mass. (Congreg.).
Coll. of the Holy Cross, Worcester, Mass. (R.C.).
Adrian Coll., Adrian, Mich. (Meth. Prot.).
Albion Coll., Albion, Mich. (M.E.).
Univ. of Michigan, Ann Arbor, Mich. (Non-sect.).
Battle Creek Coll., Battle Creek, Mich. (Seventh Day Advent).
Grand Traverse Coll., Benzonia, Mich. (Cong.).
Hillsdale Coll., Hillsdale, Mich. (F. W. Baptist).
Hope Coll., Holland, Mich. (Reformed).
Kalamazoo Coll., Kalamazoo, Mich. (Baptist).
Olivet Coll., Olivet, Mich. (Cong. and Presb.).
St. John's Coll., Collegeville, Minn. (R.C.).
Augsburg Seminary (Greek Department), Minneapolis, Minn. (Lutheran).
Macalester Coll., Minneapolis, Minn. (Presb.).
Univ. of Minnesota, Minneapolis, Minn. (Non-sect.).
Carleton Coll., Northfield, Minn. (Congreg.).
Mississippi Coll., Clinton, Miss. (Baptist).
Shaw Univ., Holly Springs, Miss. (M.E.).
Univ. of Mississippi, Oxford, Miss. (Non-sect.).
Alcorn Univ., Rodney, Miss. (Non-sect.).
Christian Univ., Canton, Mo. (Christian).
St. Vincent's Coll., Cape Girardeau, Mo. (R.C.).
Univ. of the State of Missouri, Columbia, Mo. (Non-sect.).
Central Coll., Fayette, Mo. (M. E. South).
Pritchett School Institute, Glasgow, Mo. (Non-sect.).
Lincoln Coll., Greenwood, Mo. (United Presb.).
La Grange Coll., La Grange, Mo. (Baptist).
William Jewell Coll. Liberty, Mo. (Baptist).
St. Joseph Coll., St. Joseph Mo. (R.C.).
Coll. of the Christian Brothers, St. Louis, Mo. (R.C.).
St. Louis Univ., St. Louis, Mo. (R.C.).
Washington Univ., St. Louis, Mo. (Non-sect.).
Stewartsville Coll., Stewartsville, Mo. (Non-sect.).
Drury Coll., Springfield, Mo. (Congregational).
Central Wesleyan Coll., Warrenton, Mo. (Meth Epis.).
Doane Coll., Crete, Neb. (Congregational).
Univ. of Nebraska, Lincoln, Nebr. (Non-sect.).
Creighton Coll., Omaha, Nebr. (R.C.).
Nebraska Wesleyan Univ., Osceola, Nebr. (M.E.).
State Univ. of Nevada, Elko, Nev. (Non-sect.).
DartmouthColl.,Hanover,N.H.(Congregational).
St. Benedict's Coll., Newark, N.J. (7a2, High-street), (R.C.).
Rutger's Coll., New Brunswick, N.J. (Non-sect.).
Coll. of New Jersey, Princeton, N.J. (Presb.).
Seton Hall Coll., South Orange, N.J. (R.C.)
Alfred Univ., Alfred, N.Y.

LIST OF CHIEF AMERICAN UNIVERSITIES—(*continued*).

St. Bonaventure's Coll., Allegany, N.Y. (R.C.).
St. Stephen's Coll., Annandale, N.Y. (Prot. Epis.).
Wells Coll., Aurora, N.Y. (Presb.)
Brooklyn Collegiate and Polytechnic Institute, Brooklyn, N.Y. (Non-sect.).
St. Francis Coll., Brooklyn, N.Y. (R.C.).
St. John's Coll., Brooklyn, N.Y. (R.C.).
Canasius Coll., Buffalo, N.Y. (R.C.).
St. Joseph's Coll., Buffalo, N.Y. (R.C.).
St. Lawrence Univ., Canton, N.Y. (Universalist).
Hamilton Coll., Clinton, N.Y. (Presb.).
Elmira Female Coll., Elmira, N.Y. (Presb.)
St. John's Coll., Fordham, N.Y. (New York City), (R.C.).
Hobart Coll., Geneva, N.Y. (P.E.).
Madison Univ., Hamilton, N.Y. (Baptist).
Cornell Univ., Ithaca, N.Y. (Non-sect.).
Ingham Univ., Leroy N.Y. (Presb.).
Coll. of St. Francis Xavier, New York, N.Y. (49, West Fifteenth-street), (R.C.).
Coll. of the City of New York, New York, N.Y. (Non-sect.).
Columbia Coll., New York, N.Y. (P.E.)
Manhattan Coll., New York, N.Y. (R.C.).
Rutgers Female Coll., New York, N.Y. (487 and 491, Fifth-avenue) (Non-sect.).
St. Louis Coll., New York, N.Y. (Non-sect.).
University of the City of New York, N.Y. (Non-sect).
Vassar Coll., Poughkeepsie, N.Y. (Non-sect.).
Univ. of Rochester, Rochester, N.Y. (Baptist).
Union Coll., Schenectady, N.Y. (Non-sect.).
Seminary of our Lady of Angels, Suspension Bridge, N.Y. (R.C.).
Syracuse Univ., Syracuse, N.Y. (M.E.)
Univ. of North Carolina, Chapel Hill, N.C. (Non-sect.).
Biddle Univ., Charlotte, N.C. (Presbyterian).
Davidson Coll., Davidson Coll., N.C. (Presb.)
Rutherford Coll., Happy Home, N.C. (Non-sect.).
North Carolina Coll., Mount Pleasant, N.C. (Evang. Luth.).
Shaw Univ., Raleigh N.C. (Baptist).
Trinity Coll., Trinity Coll., N.C. (M.E. South).
Wake Forest Coll., Wake Forest Coll., N.C. (Baptist).
Buchtel Coll., Akron, Ohio (Universalist).
Ashland Coll., Ashland, Ohio (Brethren).
Ohio Univ., Athens, Ohio (Non-sect.).
Baldwin Univ., Berea, Ohio (M.E).
German Wallace Coll., Berea, Ohio (M.E.).
Hebrew Union Coll., Cincinnati, Ohio (Jewish).
St. Joseph's Coll., Cincinnati, Ohio (R.C.).
St. Xavier Coll., Cincinnati, Ohio (R.C.).
Univ. of Cincinnati, Cincinnati, Ohio (Non-sect.).
Farmers' Coll., College Hill, Ohio (Non-sect.).
Capital Univ., Columbus, Ohio (Evang. Luth).
Ohio State Univ., Columbus, Ohio (Non-sect.).
Ohio Wesleyan Univ., Delaware, Ohio (M.E.).
Kenyon Coll., Gambier, Ohio (Prot. Epis.).
Denison Univ., Granville, Ohio (Baptist).
Hiram Coll., Hiram, Ohio (Disciples).
Western Reserve Coll., Hudson, Ohio (Presb. and Cong.).
Ohio Central Coll., Iberia, Ohio (Non-sect.).
Marietta Coll., Marietta, Ohio (Non-sect.)
Mt. Union Coll., Mt. Union, Ohio (Non-sect.).
Franklin Coll., New Athens, Ohio (Non-sect.).
Muskingum Coll., New Concord, Ohio (United Presb.).
Oberlin Coll., Oberlin, Ohio (Congregational).
Rio Grande Coll., Rio Grande, Ohio (F. W. Baptist).
McCorkle Coll., Sago, Ohio (Assoc. Presb.).
Scio Coll., Scio, Ohio (M.E.).
Miami Valley Coll., Springboro', Ohio (Friends).
Wittenberg Coll., Springfield, Ohio (Evang. Luth.).
Heidelberg Coll., Tiffin, Ohio (Reformed).
Urbana Univ., Urbana, Ohio (New Church).
Otterbein Univ., Westerville, Ohio (United Brethren).
Wilberforce Univ., Wilberforce, Ohio (African M.E.).
Willoughby Coll., Willoughby, Ohio (Methodist).
Wilmington Coll., Wilmington, Ohio (Friends).
Univ. of Wooster, Wooster, Ohio (Presbyterian).
Antioch Coll., Yellow Springs, Ohio (Non-sect.).
Corvallis Coll., Corvallis, Oreg. (M.E. South).
Univ. of Oregon, Eugene City, Oreg. (Non-sect.).
Pacific Univ. and Tualatin Academy, Forest Grove, Oreg. (Evangelical).
Blue Mountain Univ., La Grande, Oreg. (Non-sect.).
McMinnville Coll., McMinnville, Oreg. (Baptist)
Christian Coll., Monmouth, Oreg. (Christian).
Philomath Coll., Philomath, Oreg. (United Brethren).
Willamette Univ., Salem, Oreg. (M.E.).
Muhlenberg Coll., Allentown, Pa. (Evang. Luth.).
Lebanon Valley Coll., Annville, Pa. (United Brethren).
St. Vincent's Coll., Beatty, Pa. (R.C.).
Dickinson Coll., Carlisle, Pa. (M.E.).
Pennsylvania Military Academy, Chester, Pa. (Non-sect.).
Lafayette Coll., Easton, Pa. (Presbyterian).
Pennsylvania Coll., Gettysburg, Pa. (Evang. Luth.).
Thiel Coll., Greenville, Pa. (Evang. Luth.).
Haverford Coll., Haverford Coll., Pa. (Friends').
Monongahela Coll., Jefferson, Pa. (Baptist).
Franklin and Marshall Coll., Lancaster, Pa. (Reformed).
Univ. at Lewisberg, Lewisberg, Pa. (Baptist).
Lincoln Univ., Lincoln Univ., Chester County, Pa. (Non-sect.).
St. Francis Coll., Loretto, Pa. (R.C.).
Alleghany Coll. Meadville, Pa. (M.E.).
Mercersberg Coll., Mercersberg, Pa. (Reformed).
New Castle Coll., New Castle, Pa. (Non-sect.).
Westminster Coll., New Wilmington, Pa. (United Presb.).
La Salle Coll., Philadelphia, Pa. (R.C.).
St. Joseph's Coll., Philadelphia, Pa. (R.C.).
Univ. of Pennsylvania, Philadelphia, Pa. (Non-sect.).
Pittsburgh Catholic Coll., Pittsburgh, Pa. (R.C.)
Western Univ. of Pennsylvania, Pittsburg, Pa. (Non-sect.).
Lehigh Univ., South Bethlehem, Pa. (P.E.).
Swarthmore Coll., Swarthmore, Pa. (Friends).
Augustinian Coll. of Villanova, Villanova, Pa. (R.C.),
Washington and Jefferson Coll., Washington, Pa. (Presb.).
Waynesburg Coll., Waynesburg, Pa. (Cumb. Presb.).
Brown Univ., Providence, R.I. (Non-sect.).
Coll. of Charleston, Charleston, S.C. (Non-sect.).
Erskine Coll., Due West, S.C. (Ass. Ref. Presb.).
Furman Univ., Greenville, S.C. (Baptist).
Newberry Coll., Newberry, S.C. (Evang. Luth.).
Claflin Univ. and South Carolina Agricultural Coll. and Mechanics' Institute, Orangeburgh, S.C. (M.E.)
Woffard Coll., Spartanburg, S.C., (M. E. South).
Adger Coll., Walhalla, S.C. (Presbyterian).
East Tennessee Wesleyan Univ., Athens, Tenn. (M. E.).
Beech Grove Coll., Beech Grove, Tenn. (Non-sect.).
King Coll., Bristol, Tenn. (Presbyterian).
South-Western Presbyterian Univ., Clarksville, Tenn. (Presbyterian).
Hiwassee Coll., Hiwassee Coll., Tenn. (M. E. South).
South-Western Bap. Univ., Jackson, Tenn. (Bap.).
Univ. of Tennessee and State Agricultural Coll., Knoxville, Tenn (Non.-sect.).
Cumberland Univ., Lebanon, Tenn. (Cumb. Presbyterian).
Bethel Coll., M'Kenzie, Tenn. (Cumb. Presb.).

LIST OF CHIEF AMERICAN UNIVERSITIES—(*continued*).

Manchester Coll., Manchester, Tenn. (Non-sect.).
Maryville Coll., Maryville, Tenn. (Presbyterian).
Christian Brothers' College, Memphis, Tenn. (R.C.)
Mosheim Institute, Mosheim, Tenn. (Lutheran).
Carson Coll., Mossy Creek, Tenn. (Baptist).
Central Tennessee Coll., Nashville, Tenn. (M.E.).
Fisk Univ., Nashville, Tenn. (Congregational).
Vanderbilt Univ., Nashville, Tenn. (M. E. South).
Univ. of the South, Sewanee, Tenn. (P.E.)
Burritt Coll., Spencer, Tenn. (Christian).
Greeneville and Tusculum Coll., Tusculum, Tenn. (Non-sect.).
Winchester Normal, Winchester, Tenn.
Texas Military Instit., Austin, Tex. (Non-sect.).
St. Mary's Univ., Galveston, Tex. (R.C.).
South-Western Univ., Georgetown, Tex. (M. E. South).
Baylor Univ., Independence, Tex. (Baptist).
Mansfield Male and Female Coll., Mansfield, Tex. (Non-sect.).
Salado Coll., Salado, Tex. (Non-sect.)
Austin Coll., Sherman, Tex. (Presbyterian).
Trinity Univ., Tehuacana, Tex. (Cumb. Presb.).
Waco Univ., Waco, Tex. (Baptist).
Marvin Coll., Waxahachie, Tex. (M. E. South).
Univ. of Vermont and State Agricultural Coll., Burlington, Vt. (Non-sect.).
Middlebury Coll., Middlebury, Vt. (Congreg.).
Randolph Macon Coll., Ashland, Va. (M.E. South).
Emory and Henry Coll., Emory, Va. (M.E. South).
Hampden Sidney Coll., Hampden Sidney, Va. (Presb.).
Washington and Lee Univ., Lexington, Va. (Non-sect.).
Richmond Coll., Richmond, Va. (Baptist).
Roanoke Coll., Salem, Va. (Lutheran).
Univ. of Virginia, Univ. of Virginia, Va. (Non-sect.).
Bethany Coll., Bethany, W. Va. (Christian).
West Virginian Coll., Flemington, W. Va. (F. W. Baptist).
West Virginia Univ., Morgantown, W. Va. (Non-sect).
Shepherd Coll., Shepherdstown, W. Va. (Non-sect.).
Lawrence Univ., Appleton, Wis. (M.E.).
Beloit Coll., Beloit, Wis. (Presb. and Cong.).
Galesville Univ., Galesville, Wis. (M.E.).
Univ. of Wisconsin, Madison, Wis. (Non-sect.).
Milton Coll., Milton, Wis. (Seventh Day Bapt.).
Racine Coll., Racine, Wis. (P.E.).
Ripon Coll., Ripon, Wis. (Congregational).
North-Western Univ., Watertown, Wis. (Luth.)
Georgetown Coll., Georgetown, D.C. (R.C.).
Columbian Univ., Washington, D.C. (Non-sec.).
Howard Univ., Washington, D.C. (Non-sect.).
National Deaf-Mute Coll., Washington, D.C (Non-sect.)
Univ. of Deseret, Salt Lake City, Utah (Non-sect.).
Univ. of Washington Territory, Seattle, Wash. Ter. (Non. sect.)
Holy Angels' Coll., Vancouver City, Wash. Ter. (R.C.).

Schools of Science.

State Agricultural and Mechanical Coll., Auburn, Ala.
Arkansas Industrial Univ., Fayetteville, Ark.
Colls. of Agriculture, Mechanics, Mining, Engineering, and Chemistry (Univ. of California), Berkeley, Cal.
State Agricultural Coll. Fort Collins, Colo.
Sheffield Scientific School of Yale Coll., New Haven, Conn.
Agricultural Department of Delaware Coll., Newark, Del.
State Agricultural Coll., Eau Gallie, Fla.
Georgia State Coll. of Agriculture and Mechanic Arts (Univ. of Georgia), Athens, Ga.
South-West Georgia Agricultural Coll. (Univ. of Georgia), Cuthbert, Ga.
North Georgia Agricultural Coll. (Univ. of Georgia), Dahlonega, Ga.
Middle Georgia Military and Agricultural Coll. (Univ. of Georgia), Milledgeville, Ga.
South Georgia Coll. of Agriculture and the Mechanic Arts (Univ. of Georgia), Thomasville, Ga.
Illinois Industrial Univ., Urbana, Ill.
Purdue Univ., La Fayette, Ind.
Iowa State Agricultural Coll., Ames, Iowa.
Kansas State Agricultural Coll., Manhattan, Kan.
Agricultural and Mechanical Coll. of Kentucky, Lexington, Ky.
Louisiana State Univ. and Agricultural and Mechanical Coll., Baton Rouge, La.
Maine State Coll. of Agriculture and the Mechanic Arts, Orono, Me.
United States Naval Academy, Annapolis, Md.
Maryland Agricultural Coll., College Station, Md.
Massachusetts Agricultural Coll., Amherst, Mass.
Massachusetts Institute of Technology, Boston, Mass.
Michigan State Agricultural Coll., Lansing, Mich.
Colleges of Agriculture and of Mechanic Arts (Univ. of Minnesota), Minneapolis, Minn.
Agricultural and Mechanical Department of Alcorn Univ., Rodney, Miss.
Agricultural and Mechanical Coll. of the State of Mississippi, Starkeville, Miss.
Missouri Agricultural and Mechanical Coll. (Univ. of Missouri), Columbia, Mo.
Missouri School of Mines and Metallurgy (Univ. of Missouri), Rolla, Mo.
Industrial Coll. of the Univ. of Nebraska, Lincoln, Nebr.
Coll. of Agriculture (Univ. of Nevada), Elko, Nev.
New Hampshire Coll. of Agriculture and the Mechanic Arts, Hanover, N.H.
Rutgers Scientific School (Rutgers Coll.), New Brunswick, N.J.
Colleges of Engineering, Agriculture, Architecture, Mechanic Arts, &c. (Cornell Univ.), Ithaca, N.Y.
United States Military Academy, West Point, N.Y.
Agricultural and Mechanical Coll. (Univ. of North Carolina), Chapel Hill, N.C.
Ohio State Univ., Columbus, Ohio.
State Agricultural Coll., Corvallis, Oreg.
Pennsylvania State Coll., State Coll., Pa.
Agricultural and Scientific Department (Brown Univ.), Providence, R.I.
Claflin Univ. and South Carolina Agricultural Coll. and Mechanics' Institute, Orangeburg, S.C.
Univ. of Tennessee and State Agricultural Coll., Knoxville, Tenn.
State Agricultural and Mechanical Coll. of Texas, College Station, Tex.
Univ. of Vermont and State Agricultural Coll., Burlington, Vt.
Virginia Agricultural and Mechanical Coll., Blacksburg, Va.
Hampton Normal and Agricultural Institute, Hampton, Va.
Agricultural Department of West Virginia Univ., Morgantown, W. Va.
Coll. of Arts (Univ. of Wisconsin), Madison, Wis.

Schools of Theology.

Alabama Baptist Normal and Theological Institute, Selma, Ala. (Baptist).
Theological department of Talladega Coll., Talladega, Ala. (Congregational).
Pacific Theological Seminary, Oakland, Cal. (Congregational).
San Francisco Theological Seminary, San Francisco, Cal. (Presbyterian).
Theological Institute of Connecticut, Hartford, Conn. (Congregational).
Berkeley Divinity School, Middletown, Conn. (Protestant Episcopal).
Theological department of Yale Coll., New Haven, Conn. (Congregational).
Atlanta Baptist Seminary, Atlanta, Ga. (Bapt.).
Theological department of Mercer Univ., Macon, Ga. (Baptist).
Theological department of Blackburn Univ., Carlinville, Ill. (Presbyterian).
German Theological Class in Carthage Coll., Carthage, Ill. (Lutheran).
Chicago Theological Seminary, Chicago, Ill. (corner Ashland and Warren aves.) (Cong.).
Presbyterian Theological Seminary of the Northwest, Chicago, Ill. (1060, North Halsted-street) (Presbyterian).
Bible department of Eureka Coll., Eureka, Ill. (Christian).
Garrett Biblical Institute, Evanston, Ill. (Meth. Episcopal).
Theological department of North-western German-English Normal School, Galena, Ill. (German Methodist Episcopal).
Swedish Theological Seminary, Knoxville, Ill. (Evangelical Lutheran).
Theological department of Lincoln Univ., Lincoln, Ill. (Cumb. Presbyterian).
Wartburg Seminary, Mendota, Ill. (Ev. Luth.).
Baptist Union Theological Seminary, Morgan Park, Ill. (Baptist).
Jubilee College, Robin's Nest, Ill. (Prot. Epis.).
Augustana Theological Seminary, Rock Island, Ill. (Evangelical Lutheran).
Concordia Coll., Springfield, Ill. (Ev. Lutheran).
Theological department of Shurtleff Coll., Upper Alton, Ill. (Baptist).
Indiana Conference Theological Seminary, Bareilly, Ind. (Methodist Episcopal).
Biblical course in Indiana Asbury Univ., Greencastle, Ind. (Methodist Episcopal).
Theological department of Union Christian Coll., Merom, Ind. (Christian).
St. Meinrad's Seminary, St. Meinrad, Ind. (Roman Catholic).
Theological department of Griswold Coll., Davenport, Iowa (Protestant Episcopal).
German Presbyterian Theological School of the North-west, Dubuque, Iowa (Presbyterian).
German Coll., Mount Pleasant, Iowa (German Methodist Episcopal).
Bible department of Oskaloosa Coll., Oskaloosa, Iowa (Christian).
Kansas Theological School, Topeka, Kans. (Protestant Episcopal).
Danville Theological Seminary, Danville, Ky. (Presbyterian).
Coll. of the Bible, Lexington, Ky. (Disciples).
Southern Baptist Theological Seminary, Louisville, Ky. (Baptist).
School of Theology in Bethel Coll., Russellville, Ky. (Baptist).
Theological department of New Orleans Univ., New Orleans, La. (188, Race-st.) (Meth. Epis.).
Theological department of Straight Univ., New Orleans, La. (Congregational).
Theological Seminary, New Orleans, La. (R.C.).
Bangor Theological Seminary, Bangor, Me. (Congregational)
Bates College Theological School, Lewiston, Me. (Free Will Baptist).
Centenary Biblical Institute, Baltimore, Md. (44, Saratoga-street) (Methodist Episcopal).
Theological Seminary of St. Sulpice and St. Mary's Univ., Baltimore, Md. (R.C.).
Scholasticate of the Congregation of the Most Holy Redeemer (Mt. St. Clement), Ilchester, Md. (Roman Catholic).
Woodstock Coll., Woodstock, Md. (R.C.).
Andover Theological Seminary, Andover, Mass. (Congregational).
Boston Univ. School of Theology, Boston, Mass. (Methodist Episcopal).
Divinity School of Harvard Univ., Cambridge, Mass. (Non-sectarian).
Episcopal Theological School, Cambridge, Mass. (Protestant Episcopal).
Tufts College Divinity School, College Hill, Mass. (Universalist).
Newton Theological Institution, Newton Centre, Mass. (Baptist).
New Church Theological School, Waltham, Mass. (New Church).
Theological department of Hillsdale Coll., Hillsdale, Mich. (Free Will Baptist).
Seabury Divinity School, Faribault, Minn. (Protestant Episcopal).
Augsburg Seminary, Minnnapolis, Minn. (Luth).
St. John's Seminary, St. Joseph, Minn. (R.C.).
Bishop Green Associate Mission and Training School, Dry Grove, Miss. (Prot. Episcopal).
Natchez Seminary, Natchez, Miss. (Baptist).
St. Vincent's Coll. and Theological Seminary, Cape Girardeau, Mo. (Roman Catholic).
Jeremiah Vardeman School of Theology in William Jewell Coll., Liberty, Mo. (Baptist).
Concordia Coll. (Seminary), St. Louis, Mo. (Evangelical Lutheran).
German Congregational Theological Seminary, Crete, Nebr. (Congregational).
Divinity School of Nebraska Coll., Nebraska City, Nebr. (Protestant Episcopal).
German Theological School of Newark, Bloomfield, N.J. (Presbyterian).
Drew Theological Seminary, Madison, N.J. (Methodist Episcopal).
Theological Seminary of the Reformed (Dutch) Church in America, New Brunswick, N.J. (Reformed Dutch Church in America).
Theological Seminary of the Presbyterian Church, Princeton, N.J. (Presbyterian).
Auburn Theological Seminary, Auburn, N.Y. (Presbyterian).
Brooklyn Lay Coll. and Biblical Institute, Brooklyn, N.Y. (Non-sectarian).
Canton Theological School, Canton, N.Y. (Universalist).
De Lancey Divinity School, Geneva, N.Y. (Protestant Episcopal).
Hamilton Theological Seminary, Hamilton, N.Y. (Baptist).
Hartwick Seminary (Theological department), Hartwick Seminary, N.Y. (Lutheran).
Newburgh Theological Seminary, Newburgh, N.Y. (United Presbyterian).
General Theological Seminary of the Protestant Episcopal Church, New York, N.Y. (Protestant Episcopal).
Union Theological Seminary, New York, N.Y. (9, University-place) (Presbyterian).
Rochester Theological Seminary, Rochester, N.Y. (Baptist).
Seminary of Our Lady of Angels, Suspension Bridge, N.Y. (Roman Catholic).
St. Andrew's Divinity School, Syracuse, N.Y. (Protestant Episcopal).
St. Joseph's Provincial Seminary, Troy, N.Y. (Roman Catholic).
Theological department of Biddle Univ., Charlotte, N.C. (Presbyterian).
Bennett Seminary, Greensboro', N.C. (Methodist Episcopal).

SCHOOLS OF THEOLOGY—(*continued*).

Theological department of Shaw Univ., Raleigh, N.C. (Baptist).
Theological department of Trinity Coll., Trinity, N.C. (Methodist Episcopal Society).
Biblical department of Ashland Coll., Ashland, Ohio (Brethren).
Theol. dep. of German Wallace Coll., Berea, Ohio (Methodist Episcopal)
St. Charles Borromeo Theological Seminary, Carthagena, Ohio (R.C.).
Lane Theological Seminary, Cincinnati, Ohio (Presb.).
Mt. St. Mary's Seminary, Cincinnati, Ohio (R.C.).
St. Mary's Theological Seminary, Cleveland, Ohio (R.C.).
German Lutheran Seminary, Columbus, Ohio (Lutheran).
Union Biblical Seminary, Dayton, Ohio (U. Br.).
Theological Seminary of the Protestant Episcopal Church in the Diocese of Ohio, Gambier, Ohio (Protestant Episcopal).
Department of Theology (Oberlin Coll.), Oberlin, Ohio (Congregational).
Theological department of Wittenberg Coll., Springfield, Ohio (Ev. Lutheran).
Heidelberg Theological Seminary, Tiffin, Ohio (Reformed).
Theological department of Urbana Univ., Urbana, Ohio (New Church).
Theological Seminary of Wilberforce Univ., Wilberforce, Ohio (Af. Meth. Epis.).
United Presb. Theological Seminary of Xenia, Xenia, Ohio (United Presb.).
Western Theological Seminary of the Presbyterian Church, Alleghany City, Pa. (Presb.)
Theological course in St. Vincent's Coll., Beatty, Pa. (R.C.).
Moravian Theological Seminary, Bethlehem, Pa. (Moravian).
Theological Seminary of the General Synod of the Evangelical Lutheran Church in the United States, Gettysburg, Pa. (Ev. Luther).
Theological Seminary of the Reformed Church in the United States, Lancaster, Pa. (Ref.).
Theological dept. of Lincoln Univ., Lincoln Univ., Pa. (Presby.)
Meadville Theological School, Meadville, Pa. (Unitarian).
Philadelphia Theological Seminary of St. Charles Borromeo, Overbrook, Pa. (R.C.).
Divinity School of the Protestant Episcopal Church, Philadelphia, Pa. (Prot. Episcopal).
St. Vincent's Seminary, Philadelphia, Pa. (German-town), (R.C.).
Theological Seminary of the Evangelical Lutheran Church at Philadelphia, Philadelphia, Pa. (218, Franklin-street), (Lutheran).
Missionary Institute, Selinsgrove, Pa. (Ev. Lutheran).
Crozer Theological Seminary, Upland, Pa. (Baptist).
Augustinian Monastery of St. Thomas of Villanova, Villanova, Pa. (R.C.).
Theological Seminary of the General Assembly of the Presbyterian Church in the United States, Columbia, S.C. (Presb.).
Baker Theological Institute, Orangeburg, S.C. (Meth. Episcopal).
Theological department of Cumberland Univ., Lebanon, Tenn. (Cumb. Presb.).
Nashville Normal and Theological Institute, Nashville, Tenn. (Baptist).
Theological course in Fisk Univ., Nashville, Tenn. (Congregational).
Theological department of Central Tennessee Coll., Nashville, Tenn. (Meth. Episcopal).
Theological department of Vanderbilt Univ., Nashville, Tenn. (M. E. South).
Theological department, University of the South, Sewanee, Tenn. (Protes. Episcopal).
Theological department of Burritt Coll., Spencer, Tenn. (Christian).
Theological department of Baylor Univ., Independence, Tex. (Baptist).
Theological department of Trinity Univ., Tehuacana, Tex. (Cumb. Presb.).
Union Theological Seminary, Hampden Sidney Coll., Va. (Presb.).
Richmond Institute, Richmond, Va. (Baptist).
Theological Seminary of the Evangelical Lutheran General Synod South, Salem, Va. (Lutheran).
Protestant Episcopal Theological Seminary, Theological Seminary, Va. (Prot. Episcopal).
Nashotah House, Nashotah, Wis. (Prot. Episcopal).
Seminary of St. Francis of Sales, St. Francis Wis. (R.C.).
Theological department of Howard Univ., Washington, D.C. (Non-sect.).
Wayland Seminary, Washington, D.C. (Baptist).

Schools of Law.

Coll. of Law, Southern Univ., Greensboro', Ala.
Law School of Univ. of Alabama, Tuscaloosa, Ala.
Hastings Coll. of the Law (Univ. of California), San Francisco, Cal.
Law department of Yale Coll., New Haven, Conn.
Law department in Univ. of Georgia, Athens, Ga.
Law department of Mercer Univ., Macon, Ga.
Bloomington Law School (Illinois Wesleyan Univ.), Bloomington, Ill.
Union Coll. of Law of Chicago and Northwestern Univs., Chicago, Ill.
Law department of McKendree Coll., Lebanon, Ill.
Law department, Univ. of Notre Dame, Notre Dame, Ind.
Iowa Coll. of Law (Simpson Centenary Coll.), Des Moines, Iowa.
Law department, State Univ. of Iowa, Iowa City, Iowa.
Law department, Univ. of Kansas, Lawrence, Kan.
Coll. of Law, Kentucky Univ., Lexington, Ky.
Law department of Univ. of Louisville, Louisville, Ky.
Law department of Central Univ., Richmond, Ky.
Law department, of Straight Univ., New Orleans, La.
Law department, Univ. of Louisiana, New Orleans, La. (box 1915).
School of Law of the Univ. of Maryland, Baltimore, Md. (32, Mulberry-street).
Boston Univ. School of Law, Boston, Mass.
Law School of Harvard Univ., Cambridge, Mass.
Law department, Univ. of Michigan, Ann Arbor, Mich.
Law dept., Shaw Univ., Holly Springs, Miss.
Department of Law, Univ. of Mississippi, Oxford, Miss.
Law department, State Univ. of Missouri, Columbia, Mo.
St. Louis Law School (Washington Univ.), St. Louis Mo. (1417 Lucas Place).
Albany Law School (Union Univ.), Albany, N.Y.
Law School of Hamilton Coll., Clinton, N.Y.
Columbia Coll. Law School, New York, N.Y.
Department of Law, Univ. of the City of New York, New York, N.Y.

SCHOOLS OF LAW—(*continued*).

Law department, Univ. of North Carolina, Chapel Hill, N.C.
Law department, Rutherford Coll., Happy Home, N.C.
Law department, Trinity Coll., Trinity, N.C.
Law School of the Cincinnati Coll., Cincinnati, Ohio.
Law dept., Wilberforce Univ., Wilberforce, Ohio.
Law department, Lafayette Coll., Easton, Pa.
Law department, Univ. of Pennsylvania, Philadelphia, Pa.
Law course in Lehigh Univ., South Bethlem, P.A.
Law School, Cumberland Univ., Lebanon, Tenn.
Law dept., Vanderbilt Univ., Nashville, Tenn.
Dept. of Law (Trinity Univ.), Tehuacana, Tex.
School of Law and Equity, Washington and Lee Univ., Lexington, Va.
Law School, Richmond Coll., Richmond, Va.
Law School, Univ. of Virginia, Univ. of Virginia, Va.
Law dept., Univ. of Wisconsin, Madison, Wis.
Columbian Univ. Law School, Washington, D.C.
Law department of Georgetown Univ., Washington, D.C.
Law dept. of Howard Univ., Washington, D.C.
National Univ., Law dept., Washington, D.C.

CHAPTER II.

UNIVERSITIES IN THE UNITED STATES.

Harvard University — University of Pennsylvania — College of New Jersey.

HARVARD UNIVERSITY.

THE University comprises: (1) Harvard College; (2) a Divinity School; (3) a Law School; (4) a Medical School; (5) a Dental School; (6) the Lawrence Scientific School; and (7), under the name of the Bussey Institute, a school of Agriculture. Each of these faculties has a Dean, appointed by the Corporation, and he is assisted when necessary by a Registrar as Secretary.

The *academic year* begins on the Thursday following the last Wednesday in September. The annual Commencement is held on the last Wednesday in June. The vacation begins at Commencement, and ends on the last Wednesday in September. The Christmas recess begins on the 23rd of December, and ends on the 2nd of January. The Spring recess begins on the Wednesday before Fast Day, and ends on the Tuesday after Fast Day. Thanksgiving Day is a holiday.

The *ordinary degrees* of Bachelor of Arts, Bachelor of Science, Bachelor of Divinity, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Medicine, Civil Engineer, and Mining Engineer, are conferred on the recommendation of the several Faculties; those of Master of Arts, Doctor of Philosophy, and Doctor of Science, on the recommendation of the Academic Council. It is required that no candidates for the ordinary degrees be recommended except after thorough public examination and a residence at the University of at least one year. There are four grades of Bachelor of Arts, two grades of Bachelor of Laws, and three grades of Bachelor of Science and of Mining Engineer.

Honorary degrees are conferred by vote of the Corporation. The degrees conferred by the University are announced at Commencement.

Students on admission to any faculty are required to give bond for the payment of their dues.

In the *Divinity School* no assent to the peculiar doctrines or practices of any denomination of Christians is required.

Harvard College.

This College was founded in 1636 by vote of the General Court of the Colony of Massachusetts Bay. The locality selected for the building was then known as Newtown; but in recognition of the place where many of the colonists had been educated, this was soon afterwards changed to Cambridge; and, the year after the foundation, one John Harvard having died bequeathing his whole property to the college, the institution was distinguished by his name.

Admission is by *examination* in certain prescribed and elective subjects of the usual character. The programme is apparently intended to be of a permanent kind, but in the year 1882 underwent some modifications prescribed for students whose special instruction had not then begun. It may now be taken as follows; *Prescribed subjects.* (1). *Latin*: Cæsar's Gallic War, i.-iv. (or i.-iii., with Sallust's Catiline), subject-matter and grammar; Virgil's Aeneid, i.-vi. (or Eclogues, and Æneid, i.-v.), subject-matter and prosody; (2) translation at sight of average passages from Cæsar, and translation of easy sentences into Latin. *Greek*: (3) Translation, at sight, of easy passages of Xenophon; (4) translation into Greek of simple sentences. *Ancient History and Geography*: (5) Greek History to the death of Alexander; Roman History to the death of Commodus (Smith's Smaller History of Greece, and Leighton's History of Rome). *Mathematics*: (6) Arithmetic, without commercial technicalities, but including the metric system. (7) Algebra to quadratic equations. (8) Plane Geometry (first 13 chapters of Peirce's Geometry. *Physics*: (9) Rolfe and Gillett's Natural Philosophy for High Schools and Academies (without the Appendix), or parts i. and ii. of Arnott's Physics. *English Composition*: (10) A short English composition, correct in spelling, punctuation, grammar, division and expression, upon a subject announced at the examination. *French or German*: (11) Translation at sight of easy prose. *Elective subjects*: I. *Latin* (1) Cicero, Orations against Catiline, and for Archias, with subject-matter and grammar; translation at sight of average passages of Cicero's Orations, of the Æneid, and of Ovid's Metamorphoses, with questions on prosody; (2) translation into Latin of a passage of connected English narrative, based upon the prescribed prose. II. *Greek*: (1) Translation at sight of average passages from Herodotus or Herodotus vii., 196-239, and viii.; (2) easy Greek Prose composition, and either trans-

lation at sight of average passages from the Iliad, or Iliad ii. 1-493, and iii., with questions. III. *Mathematics*: (1) Logarithms and Plane Trigonometry; (2) Solid Geometry. IV. *Physical and Natural Science*: (1) Arnott's Physics, as far as part iv., sec. iii.; (2) either Chemistry (Nichols's Abridgment of Eliot and Storer's Manual), or Botany (Gray's How Plants Grow, with analysis of simple specimens). Every student is required to pass in all of the prescribed subjects, and and in at least *two* of the four groups of elective subjects.

Pronunciation of Latin and Greek.—In Latin the following pronunciation is recommended: *ā* as in *father*, *ă* the same sound but shorter; *ē* like the *ê* in *fête*, *ĕ* as in *set*; *ī* as in *machine*, *ĭ* as in *sit*; *ō* as in *hole*, *ŏ* as in *nor*; *ū* as in *rude*; *ŭ* as in *put*; *j* like *y* in *year*, *c* and *g* like Greek *κ* and *γ*. Instructors are requested to teach their pupils in pronouncing Greek to use the *Greek accents*, and to give (for example) *α* the sound of *a* in *father*, *η* that of *a* in *fate*, *ι* that of *i* in *machine*, &c.

Examination Papers.—A set of recent examination papers will be sent to any address, on application to the Registrar.

Preliminary Examinations.—These examinations are held only in June. Any candidate for admission to College may, at his option, pass the entire examination at one time; or he may pass a Preliminary examination on a part of the course, and be examined on the remaining subjects in some subsequent year (not in the same year). But no candidate will be admitted to examination on a part of any subject; and no account will be made of the Preliminary examination, nor will any certificate be given, unless the candidate has passed satisfactorily in at least five subjects. Candidates will be received for the Preliminary examination only in subjects in which their teachers give them certificates as prepared. These certificates must be in the hands of the Registrar one week before the examination period begins; and no person will be received at any Preliminary examination who has not presented his certificate at the required time. The Preliminary examination will be limited to the prescribed subjects (numbered 1-11), and will not be allowed to include any of the advanced or elective subjects; and certificates will be granted for any five prescribed subjects. Teachers are advised and requested not to present their pupils for preliminary examination on the *whole* minimum in either Greek, Latin, or Mathematics, unless they mean to prepare them in the advanced subjects in the same study.

Optional Examinations.—A principal aim in providing [optional examinations is to encourage teachers to carry the studies of their brighter and more diligent pupils beyond the bare requisitions for admission, in whatever direction taste or opportunity may suggest.

Full employment may thus be secured for the most capable student until he is thought mature enough to enter College; while his greater progress in school will make his college course more profitable, by enabling him to take up his studies at a more advanced stage, or to give more time to the studies of his choice. In order to pass any optional examination the candidate must earn a higher mark than is required at other examinations.

Advanced Standing.—A candidate may be admitted to the Sophomore, Junior, or Senior Class, if he appear on examination to be well versed in the following studies: 1. In the studies required for admission to the Freshman Class. 2. In all the prescribed studies already pursued by the class for which he is offered; and in as many *elective* studies as he would have pursued if he had entered at the beginning of the course.

All candidates for admission to advanced standing must be examined at the times of the regular examinations for admission, and in conformity with the following rules: 1. All candidates for admission to advanced standing must first be examined for admission to the Freshman Class; for this examination they may offer themselves at either the first or the second examination. 2. The examination on the studies of the Freshman, Sophomore, and Junior years is held *only in the autumn*, beginning on the Tuesday preceding the last Wednesday in September. 3. All candidates for admission to advanced standing will assemble on the Tuesday preceding the last Wednesday in September, punctually at eight o'clock a.m., in Harvard Hall.

In the case of graduates of other colleges who seek admission to Harvard College, the examination will be directed to ascertaining whether their previous course of study has been sufficiently extensive, and their proficiency in it sufficiently great, to fit them to join the class for which they offer themselves—a minute acquaintance with all the ground they have previously gone over not being essential. Such candidates should bring evidence of their standing at the colleges at which they received their degrees.

Time of Examination.—Two regular examinations for admission to the *Freshman* Class are held each year—one at the beginning of the summer vacation, the other at the beginning of the academic year in the autumn.

COURSE OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS.—The course of study to be pursued by a candidate for the Bachelor's degree is made up in part of studies which are prescribed for all students alike, and in part of studies selected by the student himself, from the various courses of instruction given in the College.

Prescribed Studies.—Prescribed studies occupy the whole of the Freshman year; in the Sophomore year, Rhetoric and certain written exercises are prescribed; in the Junior and Senior years, certain written exercises only are prescribed. A student will be allowed to pass an examination in Rhetoric, at the beginning of the Freshman or Sophomore year, and will be excused from pursuing the study on condition of obtaining at that examination not less than seventy per cent. of the maximum mark. The mark thus obtained will be the student's mark for Rhetoric on the annual scale. Information concerning the requirements for passing the examination can be obtained from the instructor.

Elective Studies.—In addition to the prescribed studies, each Sophomore is required to pursue courses, chosen by himself from the elective studies, amounting to twelve exercises a week, for the year; each Junior, courses amounting to fourteen exercises a week; and each Senior, courses amounting to twelve exercises a week. Students are at liberty to attend the instruction in as many other subjects as they may have time and taste for pursuing. In choosing his electives, the student must satisfy his instructors that he is qualified by his previous training to pursue those which he selects. With this limitation, all the courses given in the College are open to him in making his choice; but he is strongly recommended to make his choice with great care, under the best advice, and in such a manner that his elective courses, from first to last, may form a rationally connected whole. Undergraduates who intend to study *Engineering* are recommended by the Scientific Faculty to take, as extras, the courses of Drawing and Surveying in the Scientific School; and those who intend to study Medicine are advised by the Medical Faculty to pay special attention to the study of Natural History, Chemistry, Physics, and the French and German languages.

The Bachelor's Degree.—No student can be recommended for the degree of Bachelor of Arts until he has attained the minimum mark* in each of the prescribed studies of the College course and of the prescribed number of elective studies, and has, moreover, obtained at least *one-half* of the total maximum mark for the whole course from the time of his admission. Any student who has not complied with the requisitions for a degree before the end of his college course may be recommended for a degree in any subsequent year, when he shall have made up all conditions standing against him, and shall have passed all examinations which the Faculty may have required of him

* The minimum mark in a *prescribed* study is two-fifths of the maximum mark; in an *elective* study, two-fifths.

on account of his failure to obtain one-half of the maximum mark of the whole course. Any such candidate for the degree of Bachelor of Arts may attend the exercises in any department of instruction in the College on payment of such fees as are required by the Corporation. Persons recommended for the degree of Bachelor of Arts may be recommended either for an *ordinary* degree or for a degree *with distinction*. Distinction in the degree shall be in *three grades*, indicated by the words *cum laude*, *magna cum laude*, and *summa cum laude* respectively. Every member of the graduating class who has attained *ninety per cent.* of the maximum mark on the general scale for the whole course, or, if he has entered Sophomore, for the last three years of the course, or who receives Highest Honours in any department, shall be recommended for a degree *summa cum laude*. Every member of the graduating class (not recommended for the degree *summa cum laude*) who has attained *eighty per cent.* of the maximum mark on the general scale for the whole course, or *eighty-five per cent.* for the last three years, or who receives Honours in any department, shall be recommended for a degree *magna cum laude*. Every member of the graduating class (not recommended for the degree *summa* or *magna cum laude*) who has attained *seventy-five per cent.* on the general scale for the whole course, or who receives Honourable Mention in any study, provided he has attained *sixty-five per cent.* on the general scale for the whole course, or *seventy per cent.* for the last three years, or *seventy-five per cent.* for the last two years, shall be recommended for a degree *cum laude*. The reason for the grade of distinction in the degree shall be stated in the recommendation, in each case, that it may be inserted in the diploma; where two reasons exist, both shall be stated. Students entitled to a degree with distinction shall receive a part at Commencement.

Courses of Instruction.—These embrace the usual subjects. In each there are certain prescribed and certain elective courses.

Prizes.—These consist of: (1) Books; (2) Three Bowdoin prizes, of 100 dols. each; (3) Five Boylton prizes, for elocution, ranging in value from 45 dols. to 60 dols. each; (4) the Lee prizes, for reading, amounting in the aggregate to 300 dols.

Pecuniary Aid.—The experience of the past, it is declared, warrants the statement that good scholars of high character but slender means are seldom or never obliged to leave college for want of money.

Scholarships.—One hundred and seventeen scholarships have been established in the College, varying in their annual income from 40 dols. to 350 dols.

Beneficiary Funds.—Various other bequests and donations to the College have from time to time been made, the income of which is appropriated for the aid of deserving students in narrow circumstances. The annual amount thus appropriated is about 2000 dols, which has usually been distributed in gratuities ranging from 25 dols. to 75 dols. Among these bequests is *The Monroe Fund* of 15,000 dols., of which 10,140 dols. has now been received by the College. In the bestowal of the income of this fund, preference is to be given to natives of, or children of citizens of Concord, Mass. Applications for aid from the Beneficiary Fund are addressed to the Dean, and must be presented to him on or before *the first day of June*, by the student's parent or guardian, or by the student himself, if of age. The application should state particularly the circumstances of the case, with the reasons for asking aid.

Loan Fund.—There is also a Loan Fund, the interest of which, amounting annually to about 2700 dols., is lent to meritorious students desirous of receiving it, in sums ranging from 30 dols. to 75 dols. This fund is under the control of a Board of Trustees in Boston. More than 8000 dols. have been already added to the principal by reimbursements.

Monitorships, &c.—Besides the foregoing provisions the various monitorships, &c., amount to about 700 dols. a year, which may be considered an addition, to that extent, to the beneficiary means of the College.

Expenses.—The following table exhibits four scales of annual expenditure, the expenses of the Long Vacation not being included:

	Least. Dols.	Economical. Dols.	Moderate. Dols.	Very liberal. Dols.
Tuition	150	150	150	150
Books and Stationery	28	35	45	61
Clothing	70	120	150	300
Room	22	30	100	175
Furniture (annual average)	10	15	25	50
Board	133	152	152	304
Fuel and light	11	15	30	45
Washing	15	20	40	50
Societies and subscription to sports (annual average)	—	—	35	50
Servant	—	—	—	25
Sundries	45	55	85	150
	484	592	807	1360

Members of any department of the University can board at cost by joining the Association which uses the great dining hall of Memorial Hall. The cost of board to the members of this association is expected not to exceed 4 dols. a week. The Bursar is authorised to make

the following deduction from the full year's tuition fee in Harvard College, in cases of absence during part of the year, without regard to the cause of absence: For absence not less than three consecutive months at any time of the year, 30 dols. to be deducted. For absence during the whole year, not including the Final examinations, 100 dols. to be deducted. Any student required to pass an examination, in order to remove a condition, will have one opportunity to make up such deficiency, free of charge; but thereafter, for each attempt to make up the deficiency, a fee of 3 dols. will be charged.

The Divinity School.

The constitution of this School prescribes that "every encouragement be given to the serious, impartial, and unbiassed investigation of Christian truth, and that no assent to the peculiarities of any denomination of Christians shall be required, either of the instructors or students."

Admission.—Candidates for admission, if unknown to the Faculty, must produce testimonials of their good moral character. All graduates of colleges will be admitted without examination. Other candidates for admission to the full course must have received a good English education, and must also pass an examination in some of the Latin classical authors, and in the Greek text of the Gospels. While a preliminary college training is not insisted upon, it is urged as a most important preparation for a course of Theological study. Persons who are not candidates for a degree may be admitted to the School as *special students* at any time, without examination, and avail themselves of its advantages in whatever manner and to whatever extent they see fit. All persons who, while members of the School, shall pass a satisfactory examination in one or more subjects, will be entitled to a certificate, stating the length of time they have been members of the School, and specifying the subjects in which they have passed such examination. Candidates may be admitted to advanced standing only on examination in the studies previously pursued by the class which they propose to enter.

Course of Instruction.—The course of instruction comprises Lectures, Recitations, written Essays, and other exercises. The *subjects* studied are: The Hebrew and Biblical Aramaic Languages, and the characteristics of the New Testament Greek; Textual Criticism, and the Principles of Interpretation; Origin, Character, and History of the Books of the Bible (including the History of the Canon); Exegesis of Important Parts of the Old Testament, embracing selections from the Pentateuch, the Book of Job, the Psalms, and the Prophets;

Exegesis of Important Parts of the New Testament, particularly the Gospels, and some of the Epistles of Paul; Biblical Archæology and Geography; Ethnic Religions; Christian Evidences; Ecclesiastical History and the History of Christian Doctrine; Philosophy in its relation to Theology; Systematic Theology; Philosophical and Christian Ethics; Church Polity and Administration; the Composition and Delivery of Sermons; Liturgies and the Offices of Public Worship, and the duties of the Pastoral Office; Elocution.

Devotional services, conducted by students, are held daily in the Chapel of Divinity Hall; Conference Meetings are also regularly held. All the members of the School have exercises in the practice of Extemporaneous Speaking; and the members of the Middle and Senior Classes preach in turn in the Chapel, this last service being open to the public.

Students have access to the Divinity School Library, which consists of 19,100 volumes, and also to the College Library, which consists of 251,625 volumes, and is rich in theological literature. There is connected with the Divinity School Library a room containing books of reference, to which students have admission at all hours.

Students of this School are entitled to attend, without extra charge, any exercises in the College, or other departments of the University, for which they may show themselves fitted; except exercises in the special Laboratories, and in Elocution, which is also taught in the School.

Degrees.—The full course occupies three years, on completing which, students who shall have passed satisfactorily all required examinations in the studies pursued in the School, and in the German language (which may be studied in the College), will receive from the University the degree of *Bachelor of Divinity*. This degree will also be conferred on those students who, without taking the full course, shall have studied theology in this School for not less than one year, and shall have passed satisfactorily an examination equivalent to the regular examinations of the School. Former graduates of the School may receive the degree on examination, without further residence. Applicants for the degree must, four weeks before Commencement, which is the last Wednesday in June, present their names, with a theological thesis, to the Faculty, and must be prepared to be examined at such times as may be appointed by the several professors. The degree of *Master of Arts* will be conferred upon persons who, being both Bachelors of Arts and graduates of the School, shall pursue at the University, for at least one year, an approved course of study in Divinity, and shall pass an examination upon that course.

Scholarships and other Pecuniary Aid.—There are ten scholarships established in the School, varying in their annual income from 125 dols. to 175 dols. They are assigned by the Corporation, on the recommendation of the Faculty, to those students who are deserving, and who need assistance. In addition, the income of the *Hopkins Fund*, awarded to six students, who most need aid, about 350 dols. each; the income of the *Williams Fund*, awarded to students recommended by the Faculty, about 150 dols. to each beneficiary; the income of the *bequest of Abner W. Buttrick* of Lowell, awarded to deserving young men in preparing and educating themselves for the Ministry, about 550 dols. In some cases, beneficiary aid from more than one of the above sources may be given to the same student. In special cases, some assistance from other sources may be obtained for students who give promise of usefulness; and all who are qualified to enter upon the regular course, and who faithfully pursue it, may be enabled to meet their necessary expenses. Applicants for scholarships and for pecuniary aid must be addressed, in writing, to the Dean, before December 1.

Expenses.—The necessary expenses for the year are: For rent and care of room, 35 dols. to 75 dols.; for tuition, 50 dols. to 50 dols.; for board (thirty-eight weeks), 133 dols. to 152 dols.; for fuel, 20 dols. to 25 dols.—238 dols. to 302 dols.; to which are to be added the expenses of washing and lights. The price of rooms varies, according to their location and desirableness, from 35 dols. to 75 dols. per year. It is probable that the price of board will not exceed 4 dols. a week at Memorial Hall. For rooms in Divinity Hall, application should be made to the Bursar. Further information will be furnished, if desired, on application to the Dean.

The Law School.

Course of Instruction.—The design of this School is to afford such a training in the fundamental principles of English and American Law as will constitute the best preparation for the practice of the profession in any place where that system of law prevails. With this view, the course of study is designed to occupy the student three full years.

Admissions, Examinations, and Degrees.—Graduates of colleges will be admitted as candidates for a degree, without examination, upon producing their diplomas; candidates for a degree who are not graduates of colleges will be admitted only upon passing a satisfactory examination in the following subjects: 1. *Latin*: Candidates will be required to translate (without the aid of grammar or dictionary) passages selected from one or more of the following books: Cæsar's Commentaries on the Gallic War, Cicero's Select Orations, and the

Æneid of Virgil. 2. *Blackstone's Commentaries* (exclusive of editor's notes). Proficiency in French, representing an amount of preparatory work equivalent to that demanded of those who offer Latin will be accepted as a substitute for the requisition in the latter language. Candidates will be required to translate (without the aid of grammar or dictionary) passages from standard French prose authors, and also to render passages of easy English prose into French. The Faculty will, at their discretion, permit some other language to be substituted for Latin or French; but a satisfactory examination in some language other than English will be required in all cases. The examinations will be in writing; and, in judging the work of the candidates, attention will be paid to spelling, punctuation, grammar, and expression. Two examinations for admission will be held each year: one at the beginning of the summer vacation; the other at the beginning of the academic year in the autumn. Applicants will be required, before examination, to produce certificates of good moral character.

The Faculty will accept the degree of Bachelor of Science, or other degree of similar import, instead of the degree of Bachelor of Arts, when satisfied that it represents an amount of linguistic training equal to that required of those who offer themselves for examination.

Admission to *advanced standing* will be allowed only upon an examination, which will be held at the beginning of the academic year, and will require of the candidates a through knowledge of the following books: Williams on Real Property; Washburn on Real Property (book i., chapters 1 to 5 inclusive, 10 to 12 inclusive, and chapter 14; also book ii., chapters 1 and 2); Langdell's Cases on Contracts; Ames's Cases on Torts, parts i.-ii.; Blackstone's Commentaries, book iv.; Greenleaf on Evidence, part v.; Ames's Cases on Pleading. The examination is by printed questions, which the candidates answer in writing, in the presence of the examiner. Candidates for advanced standing will also be required to pass the examination for admission as above set forth, unless they have received a degree which entitles them to admission without examination.

Persons who are not candidates for a degree may, upon producing certificates of good moral character, enter the School as special students at any time without examination, and avail themselves of its advantages in whatever manner and to whatever extent they see fit.

All persons who, while members of the School, shall pass a satisfactory examination in one or more subjects, will be entitled to a certificate, stating the length of time they have been members of the School, and specifying the subjects in which they have passed such examination.

The degree of *Bachelor of Laws* will be conferred upon students who, having been in the School during at least two full years as candidates for a degree, shall have passed satisfactory examinations in the entire ordinary course of three years. The degree of Bachelor of Laws *cum laude* will be conferred upon students who, having been in the School during at least two full years as candidates for a degree, shall have passed satisfactory examinations in the entire honour course of three years. The examinations in the studies of the second and third years must be passed at the end of each year respectively. In the studies of the first year, the examinations must be passed either at the end of that year or at the examination for advanced standing in September following. In order to obtain the honour degree, the candidate must pass the examinations in the studies of the second and third years without any conditions, and must obtain a general average of not less than seventy-five per cent of the maximum mark in each of those years. Those who try for the honour degree and fail will receive the ordinary degree, provided their examinations come up to the standard required for that degree. Neither degree will be conferred until the candidate shall have attained the age of twenty-one years. Those who cannot remain more than two years are advised to enter at the beginning of the course and remain during the first and second years, and be absent during the third year, returning for the final examinations in June of their third year.

Fees and Expenses.—The tuition fee is 150 dols. a year. There are no extra charges in the School. The other expenses for a student for an academic year may be estimated as follows: Rent and care of furnished room, 40 dols. to 150 dols.; board for thirty-eight weeks, 133 dols. to 304 dols.; fuel and lights, 20 dols. to 25 dols.; text-books, 20 dols. to 25 dols.—Total 213 dols. to 504 dols. Board at cost can be obtained by members of the Law School at Memorial Hall. It may be anticipated that the cost per week will not exceed 4 dols. Applications for seats should be made at the Hall to the Auditor, from whom full information can be obtained. Deductions from the full year's tuition fee will be made as follows: If a student joins or leaves the School between January 1st and April 1st, one-third will be deducted. If a student joins the School between April 1st and Commencement, or leaves the School before January 1st, two-thirds will be deducted. No deduction will be made in case of a student leaving the School, unless he gives immediate notice thereof, in writing, to the Dean. Every student must file a bond with the Bursar in the sum of 200 dols., signed by two bondsmen, one of whom must be a citizen of Massachusetts, for the payment of dues to the University; or, instead of filing a

bond, he may pay his tuition fee for the year in advance, and deposit 50 dols. with the Bursar upon his entrance, and at the beginning of each subsequent academic year, to be retained until the end of the academic year, and then to be accounted for. No officer or student of the University will be accepted as bondsman. Law students who live in College rooms or board at Memorial Hall must file the same bond as undergraduates (400 dols.), or pay rent for the year in advance, and deposit 200 dols. with the Bursar as security for the payment of their board. All persons living in College rooms are subject to the regulations of the Parietal Committee, in the same manner as undergraduates.

Scholarships.—Four *Bussey scholarships* and four *University scholarships*, of the annual value of 150 dols. each, have been established in the Law School. They are assigned at the beginning of each academic year to meritorious students standing in need of such assistance, who have been in the School the whole of the preceding year, and propose to remain in it the whole of the ensuing year. The award is made by the Corporation, on the recommendation of the Faculty. One-third of the annual value of the scholarships is paid on the 10th of October following the award, one-third on the 12th of January, and one-third on the 12th of April. Applications for these scholarships must be made, in writing, to the Dean by the 1st of June,

Instruction in other Departments of the University.—The instruction given in the other departments of the University, with the exception of exercises carried on in the special laboratories, is also open, without additional charge, to students of the Law School. Among the numerous courses of instruction in Harvard College (more than one hundred in all), those upon Roman Law, Political Economy, and History are particularly suitable for Law Students; but many other courses, as those upon English Literature, Modern Languages, Philosophy, and Physical Science may be useful to students whose previous opportunities have been limited. Those who wish to avail themselves of these privileges must procure from the Dean a certificate of membership of the School. For further information and for examination papers, address The Librarian of the Law School, Cambridge, Mass.

The Scientific School.

This School offers complete courses of instruction in various departments of Science as stated below:

I. *Course of Four Years in Civil and Topographical Engineering.*—Students who complete this course, pass the required examinations,

and present a satisfactory thesis, receive the degree of Civil Engineer, and are prepared to enter on the practice of their profession.

II. *Course of Four Years in Chemistry.*—It has been so arranged that the studies of the first two years constitute a special course in Practical Chemistry, including all the details of Chemical Analysis. To those who finish satisfactorily this partial course, and prove their competency by laboratory work and by examination, certificates will be given stating the length of time they have been members of the School, and the extent of their preparation as Practical Chemists.

III. *Courses of Four Years in Natural History.*—Students who make good use of the opportunities afforded by the summer schools, or who, during the Long Vacation, pursue studies under the direction of the professors in their departments, may shorten this course of study to three years. Students who complete either of the required courses, pass the required examinations, and present a satisfactory thesis, will receive the degree of Bachelor of Science.

IV. *Course of Four Years in Mathematics, Physics, and Astronomy.*—Students who complete this course, pass the required examinations, and present a satisfactory thesis, receive the degree of Bachelor of Science.

Admission.—Candidates for admission to any one of the regular courses in Engineering, Chemistry, Natural History, *or* Mathematics, Physics, and Astronomy, will be examined in the following subjects: *Modern Geography*: Miss Hall's Our World, No. 2. *English Composition*: Each candidate will be required to write a short English composition, correct in spelling*, punctuation, grammar, division by paragraphs, and expression, upon a subject announced at the time of examination. The subjects are drawn from prescribed works, of which the following afford a recent specimen: Shakspere's Hamlet, and Romeo and Juliet; the first two books of Milton's Paradise Lost; Goldsmith's She Stoops to Conquer; Irving's Life of Goldsmith; Hawthorne's Our Old Home; George Eliot's Silas Marner; Scott's Abbot. Every candidate is expected to be familiar with *all* the books in the list. *French* or *German*: Translation at sight of easy French prose, or of easy German prose if the candidate prefer to offer German. It is expected that a knowledge of the language itself will be shown in examination, rather than a knowledge of the grammar; but proficiency in elementary grammar, a good pronunciation, or facility in speaking, will be accepted as a set-of for some deficiency in translation. There is be no required examination in pronunciation; but it is recommended

* Worcester's Dictionary is the standard.

hat attention be given to pronunciation from the outset. Candidates who offer German will be required to study French, and those who offer French will be required to study German, during the Freshman year. *Latin*: Four books of Cæsar's Commentaries, and four books of the Æneid of Virgil, or their equivalents; Latin Grammar, as much as is contained in either Allen and Greenough's or Harkness's Elementary Latin Grammar. *Arithmetic* (including the metric system of weights and measures, and the use and rudiments of the theory of logarithms). The examples requiring the use of logarithms at the examinations will be adapted to a four-place table. *Elementary Algebra*: Through quadratic equations. *Elementary Geometry*: The first five books of Chauvenet's Geometry. *Plane and Analytic Trigonometry*: As much as is contained in the first eight chapters of Chauvenet's Trigonometry, or in Wheeler's Elements of Plane Trigonometry. *Elementary Descriptive Chemistry*: As much as is contained in Nichols's Abridgment of Eliot and Storer's Manual. *Elementary Physics*: As much as is contained in Balfour Stewart's Lessons in Elementary Physics.

For the Course in Engineering, or *in Mathematics, Physics, and Astronomy*.—In addition to the above requisitions, candidates who propose to take either of these courses will be examined in: *Advanced Algebra*: As much as is contained in the larger works of Olney, Robinson, Todhunter, or Greenleaf. *Solid Geometry*: The last four books of Chauvenet's Geometry. Every candidate for admission to advanced standing will be further examined in all the studies already pursued by the class for which he offers himself.

Graduates of Harvard College who have passed a satisfactory examination while in College on the subjects of the first and second years of the Engineering course, except Drawing and Surveying, will be admitted to the third year of that course. Undergraduates who intend to study Engineering are recommended by the Scientific Faculty to take, as extras, the courses of Drawing and Surveying in the Scientific School; but these subjects may be made up in the third and fourth years.

In all the courses of the Scientific School, the successful study of any subject in College will be taken as an equivalent for the same subject in the Scientific School.

Two regular examinations for admission are held each year—one at the beginning of the Summer Vacation, and the other at the beginning of the academic year in the autumn.

Degrees.—The Degrees of Civil Engineer and Bachelor of Science: As already stated, the degree of *Civil Engineer* may be conferred upon any student who has completed the prescribed course of study in Civil

Engineering, passed the required examinations, and presented a satisfactory thesis; and the degree of *Bachelor of Science* may be conferred upon any student who has fulfilled the above requirements in Chemistry, Natural History, *or* Mathematics, Physics, and Astronomy. The grades of the degree are *cum laude, magna cum laude,* and *summa cum laude.* The grade of the degree and the course of study for which the degree is given will be specified in the diploma. The requisitions for the degree of Doctor of Science are stated further on.

Instruction for Teachers.—1. The Sshool also offers facilities to teachers, and to persons preparing to be teachers, who desire to qualify themselves in the modern methods of teaching science by observation and experiment. A one year's course of study, adapted to this purpose, may be selected from the elements of Natural History, Chemistry, and Physics, including any of the following subjects: Physical Geography and Elementary Geology; General Chemistry and Qualitative Analysis; Mineralogy; Physics; Botany; Comparative Anatomy and Physiology; Zoology. This course is flexible and comprehensive: the instruction is mainly given in the laboratories and museums of the University, and is of the most practical character, every student being taught to make experiments and study specimens. Botanical instruction is given at the botanical laboratory. Dissecting microscopes are provided for students, and the garden and greenhouses afford ample material for the practical study of the science. All work is under the direct supervision of the respective Professors. Similar facilities are afforded for the study of Zoology, Comparative Anatomy and Physiology, Geology, and Palæontology, at the laboratories of the Museum of Comparative Zoology, and of Mineralogy at the Mineral Cabinet. The instruction in Experimental Chemistry and Physics is given in the laboratories, and the students are shown the best methods of illustrating experimentally the principles of these sciences. 2. Special courses in Botany, Chemistry, and Geology are given during the vacation to teachers and others who are unable to attend during term time. 3. There is no examination for admission to the Teachers' Course.

Special Students.—Persons who are not candidates for a degree may enter the school as Special Students, at any time, without examination, and avail themselves of its advantages in whatever manner and to whatever extent they see fit. Such students, who have been members of the School for at least one year, shall be entitled to a certificate, specifying the subjects in which they have proved themselves proficient either by examination or by laboratory work.

Instruction in other Departments of the University.—All students of

the Scientific School may, if found competent, pursue any of the courses of instruction given in the other departments of the University, except exercises carried on in the special laboratories, without additional charge.

Scholarships.—Four *University scholarships*, of the annual value of 150 dols. each, have been established in the Scientific School. They are assigned at the beginning of each academic year to meritorious students standing in need of such assistance, who have been in the School the whole of the preceding year, and propose to remain in it the whole of the ensuing year. The award is made by the Corporation on the recommendation of the Faculty. One-third of the annual value of the Scholarships is paid at the time of the award, one-third on January 12th, and one-third on April 12th following. Applications for these scholarships must be addressed, in writing, to the Dean, by the 1st of June. There are also *scholarships* in the Scientific School, not exceeding eight at any one time, of the annual value of 150 dols. each, for the benefit of graduates of the State Normal Schools. The manner in which these scholarships are divided among the Normal Schools is determined by the State Board of Education. The incumbents are originally appointed for one year on the recommendation of the principals of the schools from which they have been severally graduated; these appointments may be annually renewed on the recommendation of the Faculty of the Scientific School.

Fees and Expenses.—The tuition fee for the academic year in any of the above departments or courses is 150 dols.; the tuition fees for candidates for the degree of Doctor of Science are stated elsewhere. The other expenses of a student for an academic year may be estimated as follows: Room, from 30 dols. to 100 dols.; board for thirty-eight weeks, from 133 dols. to 304 dols.; books, from 20 dols. to 25 dols.; fuel and lights, from 15 dols. to 35 dols.; washing, from 19 dols. to 38 dols.—total, from 217 dols. to 502 dols. Deductions from the full year's tuition-fee will be made as follows: If a student joins or leaves the School between January 1st and April 1st, one-third will be deducted; if a student joins the school between April 1st and Commencement, or leaves the School before January 1st, two-thirds will be deducted, but no deduction will be made in case of a student leaving the School, unless he gives immediate notice thereof, in writing, to the Dean. Students in the Scientific School may obtain rooms in the College buildings by applying to the Bursar, either by mail or in person. They may also join the Harvard Dining Association, and board at cost at Memorial Hall. Students in Chemistry are supplied with all needed apparatus, but are required to restore it in as good

condition as when received. They are charged for all damage or breakage, and also from 10 dols. to 30 dols. per annum for chemicals and use of apparatus. Students in Engineering provide their own drawing materials. The Hemenway Gymnasium is open to all members of the University without extra charge.

Testimonials and Bonds.—All students admitted to the Lawrence Scientific School must furnish satisfactory evidence of good moral character; give bonds in the sum of 200 dols., signed by two bondsmen, one of whom must be a citizen of Massachusetts, for the payment of all dues to the University; and register their names with the Dean of the Faculty of the School. Instead of filing a bond, a student may deposit with the Bursar such a sum of money as may be deemed sufficient to secure the payment of all dues to the University. Students engaging college rooms, or boarding at Memorial Hall, will be required to file the same bond as undergraduates of the College (400 dols.), or to pay rent for the year in advance, and deposit the sum of 200 dols. as security for the payment of their board; and they hold the rooms subject to the regulations of the Parietal Committee, in the same manner as if they were undergraduates. No officer or student of the University will be accepted as bondsman. For further information address the Dean.

The Astronomical Observatory.

This Observatory was founded for the purpose of scientific research in all departments of Astronomy. To fulfil this purpose, it has been equipped with instruments of the first class and with a library of about 5000 works (including pamphlets), principally relating to astronomical subjects. It has likewise been provided with funds for the maintenance and increase of its equipment and library, and for the payment of its current expenses, special provision having also been made for the publication of its observations.

Any one properly qualified to pursue the study of Practical Astronomy may be admitted to the Observatory as a student. Such students will be permitted to take part in the observations and other work carried on at the time in the Observatory, as well as to make use of the Observatory library. They will also receive from the officers of the Observatory such assistance in the study of any branch of Astronomy as can be rendered without interference with current work.

Application to be made to the Director.

The Bussey Institution, Jamaica Plain.

This is a School of Agriculture and Horticulture, established in execution of the trusts created by the will of Benjamin Bussey. It

gives systematic instruction in Agriculture, Useful and Ornamental Gardening, and Stock Raising. It is intended for the following classes of persons: (1) Young men who intend to become practical farmers, gardeners, florists, or landscape gardeners; (2) young men who will naturally be called upon to manage large estates, or who wish to qualify themselves to be stewards or overseers of gentlemen's estates; (3) persons who wish to study some special branch of Agriculture, Horticulture, Botany, or Applied Zoology.

The Bussey Institution is situated near the village of Jamaica Plain, about five miles south-west of the centre of Boston, and close to the Forest Hills station, on the Boston and Providence Railroad. Students may live either in the immediate vicinity of the School, or in Boston proper, or in some one of the neighbouring villages upon the line of the railroad.

The academic year begins on the Thursday following the last Wednesday in September, and ends on the last Wednesday in June, with a recess from December 23rd to January 2nd, inclusive, and a spring recess from the Wednesday before Fast Day to the following Tuesday, inclusive.

Instruction.—Instruction is given in Theory of Farming, Agricultural Chemistry, Applied Zoology, Horticulture (students interested in tree culture have the opportunity of seeing the raising of trees in great variety for the Arnold Arboretum in the green-houses and upon the grounds adjacent to the School); Botany, Entomology, and Quantitative Chemical Analysis (for advanced students) are also studied. Instruction is given by lectures and recitations, and by practical exercises in the laboratories, green-houses, and fields; every student being taught to make experiments, study specimens, and observe for himself. The aim of the teachers is to give the student a just idea of the principles upon which the arts of agriculture and horticulture depend; to teach him how to make intelligent use of the scientific literature which relates to these arts; and to enable him to put a proper estimate upon those kinds of evidence which are obtained by experiments and by the observation of natural objects. Examinations are held statedly to test the student's proficiency.

The courses above described are given in one year, so that they may be profitably pursued by young men of ability and judgment who cannot afford to spare much time for advanced study. In addition to these courses given at Jamaica Plain, students of the Bussey Institution, in regular standing, may freely attend any of the courses of instruction (about two hundred in number) in the other departments of the University.

Requisitions for Admission and Graduation.—Candidates for admission must be at least seventeen years of age, and must present testimonials of good moral character. No formal examination will be required of them; but each student must satisfy the instructors of his ability and of his intention to profit by the teachings of the School. Young men who may feel unprepared to pursue the foregoing courses of instruction can pass one year at the Lawrence Scientific School, in Cambridge, which provides elementary courses of instruction in Chemistry, Physics, Biology, Physical Geography, Geology, Meteorology, Drawing, French, and German.

Candidates for the degree of Bachelor of Agricultural, Horticultural, or Veterinary Science must take this preliminary course of one year at the Lawrence Scientific School, or prove by examinations that they possess an equivalent amount of knowledge. They must, furthermore, on completion of the stated courses above described, devote a year to advanced study at the Bussey Institution, and to practical research in Agriculture or Horticulture, or in Botany, Anatomy, or Chemistry as applied to those arts, and must satisfy the instructors, by passing examinations, that they have acquired a thorough knowledge of the subjects taught at the School.

Candidates for a degree are expected to pursue with equal diligence all the subjects above described, but the advanced studies of the final year may be varied, at the discretion of the instructors, in accordance with the student's aims and purposes. Instead of Quantitative Analysis, any other advanced elective course may be substituted. Among the numerous courses of this character open to students of the Bussey Institution, though given in other departments of the University, those upon Advanced Botany (both phaenogamic and cryptogamic), Geology, Zoology, and Physics, upon Physiology, Pathology, Political Economy, and Surveying, are particularly suitable for agricultural students.

Students who are not candidates for a degree may, upon producing certificates of good moral character, join the School at any time, without examination, to pursue any special course or courses of instruction which they are qualified to pursue with advantage.

Libraries.—Students may freely use the Special Agricultural Library at the Bussey Institution; the College Library at Cambridge, from which books are brought regularly to the Bussey Institution by express; and the Boston Public Library, which has a branch and office for the delivery of books in Jamaica Plain not far from the Bussey Institution.

Bond or Deposit.—Every student, when admitted, must give a bond

in the sum of 200 dols. to pay all charges accruing under the laws and customs of the University. The bond must be executed by two bondsmen, who must be satisfactory to the Treasurer (office No. 70, Water-street, Boston), and one of whom must be a citizen of Massachusetts. Instead of filing a bond, a student may pay his tuition fee for the year in advance, and deposit such a sum of money, not exceeding 50 dols., as may be deemed sufficient to secure the payment of other school dues. Special students will pay the tuition fees in advance at the Treasurer's office, or to Professor F. H. Storer, Dean, at the Bussey Institution.

Fees and Expenses.—The regular fee for the academic year is 150 dols.: for half or any less fraction of a year, 75 dols.; for any fraction of a year greater than one-half, the fee for the whole year will be charged. The regular fee will be charged also to those special students who devote themselves to continuous laboratory work in a single department of the School. For any one of the special courses above enumerated under the heading "Instruction," the fee is 40 dols. for the year, excepting for Entomology, which is given during the last half of the year at 20 dols. The tuition fees will be freely remitted to poor and meritorious students. The other expenses of a student for an academic year, not including clothing, may be estimated as follows: Room, 40 dols. to 100 dols.; board for thirty-eight weeks, 133 dols. to 200 dols.; text-books and instruments, 15 dols. to 20 dols.; fuel and lights, 15 dols. to 25 dols.; washing, 15 dols. to 25 dols.—218 dols. to 370 dols. For further information, address The Dean, Jamaica Plain, Mass.

Graduate Department.

Courses of Instruction for Bachelors of Arts and of Science.—The following courses of study have been arranged with special reference to graduates. Besides these, all the elective courses offered to undergraduates are open to graduates. No undergraduate is allowed to take any graduate course except by vote of the Faculty on the recommendation of the instructors in the department of study to which the course belongs: Semitic Languages, Sanskrit, Classical Philology, Modern Languages, Philosophy, Political Economy, History, Roman Law, Music, Mathematics, Physics, Chemistry, Natural History.

The Degrees of A.M., Ph.D., and S.D.—The Degrees of Master of Arts, Doctor of Philosophy, and Doctor of Science are conferred on candidates recommended for them by the Academic Council of the University. The following are the *Standing Rules of the Corporation and Overseers* relating to these degrees:

1. The degrees of Master of Arts and Doctor of Philosophy are open to

Bachelors of Arts of Harvard College, and to Bachelors of Arts of other colleges, who shall have satisfied the College Faculty by examination that the course of study for which they received the Bachelor's degree is equivalent to that for which the Bachelor's degree is given in Harvard College, or shall have passed such additional examinations as that Faculty may prescribe.

2. The degree of Doctor of Science is open to Bachelors of Science of Harvard University, and to Bachelors of Science and Bachelors of Philosophy of other institutions who shall have satisfied the Faculty of the Lawrence Scientific School, by examination, that the course of study for which they received the Bachelor's degree is equivalent to that for which the degree is given in Harvard University, or shall have passed such additional examinations as that Faculty may prescribe.

3. The Academic Council will recommend for the degree of Doctor of Philosophy candidates otherwise properly qualified who, after taking the Bachelor's degree, shall pursue at Harvard University for two years a course of liberal study, approved by the Council, in any one of the following departments: Philology, Philosophy, History, Political Science, Mathematics, Physics, Natural History or Music; shall pass a thorough examination on that course, and shall present a satisfactory thesis.

4. The Academic Council will recommend for the degree of Doctor of Science candidates, otherwise properly qualified, who, after taking their Bachelor's degree, shall reside at least two years at the University, and pursue during three years a course of scientific study embracing at least two subjects, and approved by the Council, and shall pass a thorough examination upon that course, showing in one of the subjects special attainments, and shall also make some contribution to science, or some special investigation, to be embodied in a Thesis; provided, however, that a course of study of two years only shall suffice for candidates who are both Bachelors of Arts and Bachelors of Science of Harvard University.

5. The Academic Council will recommend for the degree of Master of Arts candidates otherwise properly qualified who, after taking the Bachelor's degree, shall pursue for at least one year at the University a course of liberal study approved by the Council, and shall pass a thorough examination on that course.

6. The Academic Council will also recommend for the degree of Master of Arts candidates otherwise properly qualified who shall pursue at the University for at least one year, after taking the degree of Bachelor of Laws, Bachelor of Divinity, or Doctor of Medicine in Harvard University, a course of study in Law, Theology, or Medicine, approved by the Council, and shall pass a thorough examination on that course.

7. In special cases, the Academic Council is authorised to remit the requisition of residence at the University to Bachelors of Arts or Science of Harvard University.

8. The degree of Doctor of Philosophy carries with it that of Master of Arts; the full title of the degree being Doctor of Philosophy *and* Master of Arts.

Fees and Bonds.—The fees to be paid by Bachelors of Arts or Science who receive instruction as candidates for the degree of Master of Arts, Doctor of Philosophy, or Doctor of Science, or who attend lectures or recitations without being members of any professional school, are as follows: At the rate of 15 dols. for one hour a week of instruction during the academic year, up to 150 dols., the fees covering examinations and certificates; except that the fee for the examination for the degree of Doctor of Philosophy or Doctor of Science shall in all cases be 60 dols., and for special examinations for the degree of Master of Arts the fee shall be 30 dols., and every candidate for the degree of Master of Arts, Doctor of Philosophy, or Doctor of Science, whether resident or not, must pay at least the minimum fee of 30 dols. a year to the University, unless he pays a fee as a member of a professional school. For any laboratory course the fee will be 150 dols. a year. Students must pay the *full year's fee* for all the courses of instruction which they attend. Any student paying the full fee of 150 dols. in any department of the University is entitled to attend any instruction (but not laboratory courses) in any other department, without further payment. Graduates of the University, or other collegiate institutions, desirous of pursuing their studies at Cambridge without guidance, may enjoy the use of the Library on the payment of 5 dols. a year; but such graduates are not entitled to be classed as students of the University, nor will residence on these terms be accepted as residence qualifying for any degree. Candidates for the higher degrees, and resident graduates who receive instruction at the University, must give bonds in the sum of 200 dols., signed by two bondsmen, one of whom must be a citizen of Massachusetts, for the payment of all dues to the University; but, instead of filing a bond, any student who prefers so to do, may pay his fees in advance, and deposit with the Bursar such a sum of money as may be deemed sufficient to secure payment of all other dues to the University.

Applications.—Any one who wishes to study for the degree of A.M., Ph.D., or S.D., must send a written application to be admitted as a candidate (with a statement of his qualifications) to the Secretary of the Academic Council.

If the applicant is not qualified for candidacy by having received the degree of A.B. or S.B. from Harvard University, his request must first be referred to the College Faculty or to the Faculty of the Scientific School. Such requests are not granted, unless thoroughly satisfactory grounds are shown. In ordinary cases, the Faculties prefer to admit graduates of other institutions to advanced standing in the undergraduate courses, or, at any rate, to receive them as candidates for

the higher degrees only after a suitable period of study at this University.

Every application for admission to candidacy for the degree of A.M. must contain a definite statement of the course of study proposed for the degree. The same fulness of detail is not expected of candidates for the degrees of Ph.D. and S.D. The course for the degree of A.M. may be limited to one department of study, or may be miscellaneous in character; that pursued for the degree of Ph.D. must belong to *one* of the departments named in § 3 of the *Standing Rules of the Corporation and Overseers*. But the committees exercise their discretion in admitting courses which, without falling strictly within the limits of any one of those departments, still constitute connected fields of investigation and work, and can legitimately be referred to single departments. The degree of A.M. is conferred for a good year of study in fulfilment of a determinate programme. The doctorates are given, not for the mere reason of faithful study for a prescribed time or on a prescribed course, but on the ground of high attainment in a special subject, manifested not only by examinations, but by the performance of a masterly piece of work. Hence, candidates for the degrees of Ph.D. and S.D., especially if they have not already acquired, at the outset, considerable knowledge in the branches of study which they pursue for the degrees, must often expect to continue their candidacy for longer periods than those required by the standing rules.

All applications must be in the hands of the Secretary at least one week before the meeting of the Council at which they are to be presented, in order that they may first be referred to the appropriate committees; and applications from graduates of other colleges must be received *two weeks* before the meeting of the Council. But no applications should be sent in during the vacation, which extends from the last Wednesday in June to the last Wednesday in September. Every application must state the *full name* of the applicant, the *dates* at which he attained the degrees he already holds, his *post-office* address, and (if he has already taken his residence near the University) the place of his *room* or *house*; and candidates are required to inform the Secretary of the Academic Council of any change in their address.

Registration.—Every candidate for the degree of A.M., Ph.D., or S.D., whether resident at the University or not, is required to give written notice to the Secretary of the Academic Council, before the first Wednesday in October in each year, of his purpose to continue or discontinue his candidacy, and, if he continues, to state his address. A candidate who omits this notice will be dropped from the list.

Every graduate student, whether a candidate for a degree or not, who wishes to attend instruction at the University, must obtain authority to do so, and register at No. 5, University Hall, at the beginning of the year,

Any candidate for the degree of A.M., Ph.D., or S.D., who withdraws from his candidacy, must give immediate notice of his withdrawal to the Secretary of the Academic Council and to the Bursar, and pay his dues to the University.

Fellowships.—The *Harris Fellowship* has an endowment of ten thousand dollars, the yearly income of which is to be applied under the following conditions established by the founder: "That this income be given to some graduate of acknowledged excellence in one or more departments of literature or science (but not necessarily of the highest college rank), for one or more years, &c., &c." The *Graduates' scholarship* has an endowment of twenty thousand dollars, the income of which is to be used in accordance with the following directions, given by the founder: ". . . For the encouragement and attainment of a higher, broader, and more thorough scholarship than is required or expected of undergraduates, in all sound literature and learning, except science strictly so called." *Parker Fellowships*: Four Fellowships of the annual value of 800 dols. each have been created from the income of the bequest of John Parker, Jr. These fellowships may be held by graduates of Harvard College, or of any other department of the University, for a term not exceeding three years in any case. The *John Thornton Kirkland fellowship*: This fellowship, tenable for three years, having an endowment of about eleven thousand dollars, has been established with the gift of George Bancroft, LL.D. The incumbent of this fellowship must, as a rule, have resided at least three years at the University as a member either of the College or of one of the Schools.

The Toppan Prize.—A prize of 150 dols. is offered in the Graduate Department of the University for the best Essay (of sufficient merit) on one of certain selected subjects.

Admission to Harvard College without Matriculation.

The *elective* courses of study in Harvard College are open to persons not less than twenty-one years of age who satisfy the Faculty of their fitness to pursue the particular courses they elect, although they have not passed the usual examination for admission to College, and do not propose to be candidates for the degree of Bachelor of Arts. A certificate of proficiency will be given, if desired, to any person who, having faithfully pursued his chosen subjects throughout the year,

passes the mid-year and June examinations therein, and attains not less than seventy-five per cent. of the maximum marks therefor. The Faculty reserve the right to deprive any student of his privileges at any time, if he abuse or fail to use them. Persons who propose to avail themselves of this provision will be required to begin their attendance at the beginning of the academic year. They must present themselves at No. 1, Harvard Hall, on the Thursday following the last Wednesday in September, at 10 A.M., prepared to furnish testimonials as to their age and character, to indicate the courses of study they wish to pursue, and to demonstrate by examination or otherwise their fitness to attend those courses.

The *tuition fees* for unmatriculated students will be computed at the rate of 15 dols. for one hour a week of instruction during the academic year, up to 150 dols.—the fees covering examinations and certificates; but in no case shall the fee be less than 30 dols. a year. For any laboratory course, the fee will be 150 dols. a year. Any student who attends a course of instruction for only a part of the year must pay the full year's fee for that course. The bills of unmatriculated students are payable in each year on January 12th, April 12th, and October 10th; but when a student severs his connection with the College, his whole bill becomes payable at once. Each bill will contain one-third of the annual charges. Unmatriculated students must file a bond for 200 dols., similar to that filed by undergraduates, or make a deposit with the Bursar. For further information on this subject, address the Registrar, Cambridge, Mass.

Evening Readings.—Evening Readings, consisting mainly of selections from ancient and modern classics, are open to all members of the University, and also to the public, several evenings in the week, from October till April.

The University Library.

The several libraries now contain about the following numbers of bound volumes: Gore Hall, 187,300; Lawrence Scientific School, 2300; Bussey Institution (Jamaica Plain), 2200; Phillips Library (Observatory), 2700; Botanic Garden (Herbarium Library), 3500; Law School, 18,000; Divinity School, 19,100; Medical School (Boston), 2000; Museum of Comparative Zoology, 14,100; Peabody Museum, 425—251,625.

The Hemenway Gymnasium, Cambridge.

The new gymnasium, named in honour of Augustus Hemenway of Boston, who gave it to the University, is a handsome and spacious structure, built and equipped with the utmost thoroughness. It is furnished with the best patterns of ordinary gymnastic apparatus, and

with many new appliances designed to develop the different parts of the body, and so constructed that they can be adjusted to the strength of the strong or to the weakness of the weak. The bathing arrangements are complete, and the dressing accommodations are ample. Facilities for recreative exercise have been provided in the bowling alleys and ball court, and in the rowing, fencing, and sparring rooms.

*The Episcopal Theological School in Cambridge.**

Conditions of Admission.—Bachelors of Arts may be admitted to the membership of the School. All other applicants must be examined in the Latin and Greek Languages, History, Rhetoric, Mental and Moral Science, and shall be admitted only by an affirmative vote of a majority of the members of the Faculty. In all cases, satisfactory evidence shall also be produced of such religious character as renders the applicant apt and meet for the sacred Ministry. Members of other Theological seminaries may be admitted *ad eundem.* Candidates for Orders shall have the preference in the selection of rooms in the dormitory.

Expenses.—There are no charges made by the School for rooms and tuition. The cost of board, fuel, lights, washing, and necessary books can be met with about 225 dols. per annum.

Term Time, &c.—The annual term opens on the fourth Wednesday of September, and closes with Commencement, the third Wednesday in June. Vacations: between the close and opening of the terms, as above; from December 24th to January 6th; from the Saturday before Passion Week to Easter Tuesday, inclusive.

Buildings.—The School possesses a Dormitory, Library (containing Lecture rooms), Refectory, and Chapel, all new, and excellently adapted to the comfort and convenience of students. They are situated on Brattle-street, a few minutes' walk from Harvard-square. Particular attention is called to the fact that St. John's Memorial Chapel, on Brattle-street, was erected and given to the School for the especial and free accommodation of Harvard students. They are, therefore, invited to attend its services, and the Dean regards it as a part of his duty, as well as a pleasure, to extend any pastoral attention that may be desired by them. For further details of information regarding this institution, address the Dean at the School.

Examinations for Women.

These are held in the subjects of the admission and higher examinations.

*Not a part of the organization of Harvard University.

University of Pennsylvania.

Instruction is now given in the University of Pennsylvania in seven different Departments, viz.: The Department of Arts, the Towne Scientific School, the Department of Medicine, the Department of Law, the Auxiliary Department of Medicine, the Department of Music, the Department of Dentistry.

The Trustees of the University have erected, for the accommodation of the Departments of Arts and of The Towne Scientific School, one of the largest and most conveniently arranged college buildings in the country. The students in these two Departments are under a common government and discipline, and are in constant association with each other. The instruction, however, in each Department is in charge of a distinct Faculty, and both the objects of that instruction and the methods of imparting it differ essentially.

The details of the course of instruction in each of the Departments will be found under the proper head. Lectures on the following subjects are included in the instruction given to the students in the Department of Arts and the Towne Scientific School, viz.: On Systems of Intellectual Philosophy, on Mediæval History, on German Literature, on Rhetoric and English Prose Authors, on National Economy, on the History of the Civil Law, and on Communism, on Physics and Astronomical Physics, on Engineering and Contracts, on Mineralogy, on Geology, and on Metallurgy and Applied Chemistry, on Inorganic and Organic Chemistry.

Lectures on the *Science of Music* are delivered twice a week to such persons, members of the University and others, male or female, as may desire systematic instruction on this subject. This instruction includes *Harmony*, *Counterpoint*, and *Composition*, with as much of the History of Music as may be necessary to illustrate these subjects. The degree of *Bachelor of Music* will be conferred on those who attend two courses of lectures and pass satisfactory periodical and final examinations thereon.

General Information in regard to the Undergraduate Departments.

The following is an abstract of the regulations in regard to *Scholarships* (excepting the Towne Scholarships):

Each candidate must present written testimonials to the Provost at or before the Entrance examinations in June and September. He must pass these examinations, or (in the case of those who are already in the classes) the annual examination, with credit. He will then be recommended for admission to the proper Committee. A limited

number only can be admitted, and the scholarships are granted for one year only, renewable by the decision of the Committee.

Persons of both sexes are now admitted to the Lectures on History, Social Science, and Speculative Philosophy, given to the Seniors; and to those on the older English Classics given to the Seniors and Juniors: in the Towne Scientific School, to those on General Chemistry, given to the Freshmen and Sophomores; to those on Physics, given to the Sophomores and Juniors; and to the instruction in Analytical Chemistry, given to the Juniors and Seniors in the Laboratories; in the Department of Music, to the instruction given in that Science. Those desiring to attend in any of these subjects should apply to the Dean. They should have the same preparation, in order to profit by the instruction, as that required of the young men pursuing the same advanced studies. The fee for each course is 5 dols.

The income of the *Bloomfield Moore Fund* is appropriated to enable those women (not exceeding six in number in any one year) who are or propose to become teachers, and who desire to receive instruction in one or more of the above named subjects, to do so without cost to them.

A public Commencement for conferring degrees is held on the 15th of June, unless that date should fall on Saturday or Sunday. In such case the Commencement is held on the Friday preceding.

Prizes.—A stated annual appropriation is made by the Board of Trustees to enable the Faculty to offer *prizes* for superiority in the performance of voluntary exercises (in most cases) over and above the ordinary course. The subjects are proposed by the several professors early in the year; the award is made by the Faculty, and reported to the Board, before the month of June; and the names of those who have received prizes are published at the annual Commencement.

The Society of the Alumni have founded several prizes.

Department of Arts.

Terms of Admission.—To be admitted into the Freshman Class of the Department of Arts, a student must be at least fourteen years of age, and pass a satisfactory examination on the following subjects and authors: *Geography*: Ancient and Modern Geography (Mitchell's Ancient Atlas is recommended). *English*: Grammar, Composition, and Etymology (Greek and Latin roots). Abbott's How to Parse indicates the amount required in Grammar, and Sargent's Manual the amount in Etymology; a composition, one (foolscap) page long, will be required on a theme to be set at the time of the examination. *Greek*: Greek Grammar; Greek Prose Composition (as much as is contained in Arnold to the end of exercise 34); Xenophon (four books of the

Anabasis); Homer (first three books of the Iliad). *Latin*: Latin Gammar; Cæsar (three books of the Gallic War); Virgil (six books of the Æneid); Cicero (four Orations against Catiline); Horace (first book of the Odes); Arnold's Latin Prose Composition (to the end of exercise 20). *Mathematics*: Arithmetic, including the decimal system of weights and measures; Algebra, through simple equations.

The students in the Department of Arts are divided into four classes, viz.: The Senior, the Junior, the Sophomore, and the Freshman Classes.

All candidates for the degree of *Bachelor of Arts* pursue the same studies during the Freshman and Sophomore years. For the remaining two years of the course a limited election or choice of studies is permitted under the following rules: During the two years *all* the members of the class are *required* to study Intellectual and Moral Philosophy; Mathematical Astronomy; English Literature and General History; the elements of Social and Political Science; General Mechanics, and Physics (Astronomical and Terrestrial); and English Composition and Oratory. Besides these studies, each member of the class at the beginning of his Junior year must select from the following list *three* subjects of study to be pursued for the last two years of his course, the alternatives being the following. He must take either: Greek or German; Latin or French; Pure Mathematics or advanced studies in History and English Literature. A student may pursue the full course, or he may take any portion of that course which the Faculty may sanction; but admission to a *partial course* is to be considered an exceptional arrangement, made by the Faculty, to be granted and withdrawn, when and as it may be deemed expedient. At the termination of such a partial course, satisfactorily pursued, a certificate of proficiency will be awarded.

The degree of *Master of Arts* will be conferred on the alumni of the University, Bachelors of Arts of three years' standing, who give evidence that they have pursued liberal studies since their graduation, and present a satisfactory Thesis to the Faculty of Arts. The theses must be sent to the Dean of the Faculty by the first Friday in April.

College Terms and Vacations—Tuition Fees.—The college year in the Department of Arts and the Towne Scientific School is divided into three terms: the *first* beginning on the 15th of September, and ending on the 24th of December; the *second* beginning on the 2nd of January, and ending on the Wednesday before Easter; and the *third* beginning on the Tuesday after Easter, and ending on the 15th of June (Commencement day). The annual *tuition fee* is 150 dols., or 50 dols. for each

term, payable always in advance, to the Treasurer of the University, at the beginning of each term. The *graduation fee* is 20 dols. During the first and second terms private examinations in the way of review are held by each professor; and an examination is held by the Faculties of both Departments, partly in the month of January, and concluding, for the Senior class, in May, and for the three lower classes, at the close of the college year in June. At the end of each term students who attain distinction are classed in order of merit. Students shown by their term average to be deficient in any of their studies may be conditionally attached to their class until they prove on re-examination that said deficiency has been fully made up. In case of persistent neglect of study, great irregularity of attendance, or evident inability to keep up with the class, from any cause, the student must be dropped from the rolls.

Course of Instruction for the Degree of Bachelor of Arts.—Freshman Class—Greek: Xenophon (Hellenics); Æschylus; Arnold's Greek Prose Composition completed. *Latin*: Selections from Livy and Horace's Satires. *Mathematics*: Algebra (Thompson and Quimby); Geometry (Chauvenet). *History*: Freeman's General Sketch of History. *English*: How to Write Clearly (Abbott) and A System of Punctuation (McElroy). *French*: Collot's Pronouncing French Reader; Brégy's Compendium of Grammatical Rules (First Part), or equivalents.

Sophomore Class. — Greek: Thucydides (Sicilian Expedition) Aristophanes or Euripides; Greek Composition. *Latin*: Tacitus (Agricola, Germania, or Annals); Cicero (De Senectute or De Officiis); Horace (Selected Odes). *Mathematics*: Plane and Spherical Trigonometry (Chauvenet), with applications; Analytical Geometry (Bowser). *English*: Elements of Rhetoric (Lectures); Compositions and Declamations; Haldeman's Outlines of Etymology; Lounsbury's English Language. *German*: Whitney's German Grammar; Woodbury's Elementry Reader. *French* (*Voluntary*): Un Philosophe sous les Toits; Brégy's Compendium of Rules (Second Part). *Chemistry*: Inorganic and Organic Chemistry (Experimental Lectures, with Examinations).

Junior Class. — Philosophy (*required*): Intellectual Philosophy; Lectures introductory to Philosophy; Hamilton's Philosophy; Moral Philosophy; Whewell's Elements (Lectures); Logic (Atwater). *Greek* (*elective* with *German*): Sophocles; Lysias, or Isocrates; Theocritus. *Latin* (*elective* with *French*): Selections from Juvenal; Cicero (De Officiis, De Finibus, or De Amicitia); Horace (Epistles); reading at sight. *Pure Mathematics* (*elective* with *History* and *English*): Differential Calculus. *Astronomy* (*required*): Mathematical Astronomy (begun).

Physics (*required*): Mechanics, Sound, Heat (lectures and recitations). *Chemistry* (*required*): Inorganic and Organic Chemistry, completed (experimental lectures with examinations). *English* (*required*): Compositions and Declamations. *English* (*elective* with *Pure Mathematics*): Shakspere (several plays illustrating the growth of the dramatist's mind and art). *History* (*elective* with *Pure Mathematics*): Smith's Student's Gibbon; Green's Short History of the English People; Lectures on the History of the Civil Law. *German* (*elective* with *Greek*): Whitney's German Grammar; Schiller's Maria Stuart; Goethe's Hermann und Dorothea. *French* (*elective* with *Latin*): Racine; Noel et Chapsal's Grammaire; Sadler's Cours de Versions.

Senior Class. — *Philosophy* (*required*): Intellectual Philosophy — Lectures — Systems from Bacon to the present day; Berkeley's Principles, annotated; Evidences of Natural and Revealed Religion; Butler's Analogy. *Greek* (*elective* with *German*): Demosthenes de Coronâ; Euripides; Plato (Apology and Crito, or Phædo). *Latin* (*elective* with *French*): Cicero (Tusculanæ), or Lucretius (selections); Horace (Ars Poetica); reading at sight. *Pure Mathematics* (*elective* with *English*): Integral Calculus. *Astronomy*: Mathematical Astronomy (completed). *Physics* (*required*): Light, Electricity, and Astronomical Physics (lectures and recitations). *History* (*required*): Mediæval History (lectures); Compositions and Original Declamations. *History* (*elective*): Tain's History of English Literature. *English* (*elective* with *Pure Mathematics*): Chaucer (the Canterbury Tales; Spenser (selections). *Social Science* (*required*): International Law Lectures; Thompson's Social Science and National Economy. *German* (*elective* with *Greek*): Schiller's Poems; Goethe's Iphigenia; Translations into German; History of German Literature. *French* (*elective* with *Latin*): Molière; Bridge's History of French Literature; Brégy's Compendium of Rules (reviewed); French Compositions.

The Towne Scientific School.

Aims of the Towne Scientific School.—The design of the instruction in this School is to give a thorough technical and professional training to those who propose to engage in the following, among other pursuits, viz.: In Chemistry, with its manifold applications to the industrial arts; in Metallurgy and Assaying; in Mineralogy and Geology; in Civil, Dynamical or Mechanical, and Mining Engineering; in Mechanical Drawing and Architecture, and in studies preparatory to Medical study.

In order that this professional training shall be complete and

systematic, and rest upon a broad basis, so that the student at its close may not be a mere specialist, but a man of liberal education as well, it has been determined that the course shall be a comprehensive one, extending through five years.* The first two years are devoted not merely to a thorough training in the preparatory and elementary Mathematics, Chemistry, and the methods of scientific research generally, but a considerable portion of the time is given to instruction in certain English studies—History, Logic, English Composition, and Rhetoric—as well as to the Modern Languages and to Mechanical and Free-hand Drawing.

At the close of these two years, the student is presumed to be prepared for studies of a strictly professional or technical character, and he then selects one of six parallel courses in which instruction is given in this Department, and during the last three years his work is confined mainly to the studies of one or other of these courses, in accordance with the plans he may have formed in regard to his future profession.

The professional courses from which a student may select are at present: I. Course in Analytical and Applied Chemistry and Mineralogy; II. Course in Geology and Mining; III. Course in Civil Engineering; IV. Course in Mechanical Engineering; V. Course in Drawing and Architecture; VI. Course Preparatory to Medical Studies.

The degree conferred by the University, on the completion of any one of these professional courses, in addition to the studies pursued by the whole class during the five years of the curriculum, and on the presentation of a satisfactory Thesis, is that of Bachelor of Science.

Special students not candidates for a degree may be received into any of the professional courses when the professor in charge of that course is satisfied of their competency to profit by his instructions. They take all those studies which the professor thinks necessary to the completeness of the course, together with such others as the Faculty may require. At the end of two years of study, they will receive a Certificate of Proficiency on passing the examination required, and presenting a satisfactory Thesis. Persons who may be desirous of prosecuting any special study in any department of this School are allowed to make arrangements for that purpose with the pro-

* As the four years' curriculum, heretofore in force, has been found too short for the work required of undergraduates of this Faculty, it has been lengthened to five years, while the age for admission has been lowered from sixteen to fifteen years, enabling young men to graduate, as formerly, by their twentieth year. The statements in the catalogue have been adapted to the new arrangement.

fessor in charge of that department, subject to the approval of the Faculty.

A *Post-graduate Course* of instruction in this School has been organised.

The Degree of *Master of Science* will be conferred upon Bachelors of Science who have pursued the course of post-graduate instruction prescribed, and who have shown their proficiency by examination, and by presenting a satisfactory thesis.

Terms of Admission.—Candidates for admission to the *Freshman Class* in the Towne Scientific School must be at least fifteen years of age, and must be prepared to pass an examination in Ancient and Modern Geography, in English, in Arithmetic (including the decimal system of weights and measures), in Algebra (through quadratic equations), and in the first four books of Chauvenet's Geometry. Candidates for the *Senior or Junior Class*, if they pass the requisite examinations satisfactorily, will have special appointments made for their examinations on the studies of the Sophomore and Junior years. A second *examination* of applicants for admission will be held under the same conditions, before the opening of the collegiate year, in September. For dates, &c., see Circular.

The *fees* for instruction in the Towne Scientific School are 50 dols. per term (payable in advance to the Treasurer at the beginning of each term), or 150 dols. per annum. The graduation fee is 20 dols. A separate charge of 10 dols. per term is made to the Chemical and Geological students of the Junior and Senior Classes for chemicals and gas, and a like charge of 5 dols. per term to students of the Sub-junior Class. Students are required to have their own apparatus.

Ten *prize scholarships* in the Towne Scientific School (tenable for five years) are given annually to pupils from the public schools of Philadelphia. The candidates for the scholarships are sent up by the Board of Public Education to the annual examination for admission, in the month of June. They are examined at the same hours and on the same subjects as other candidates, but not necessarily on the same papers. The scholarships are bestowed upon those of their number (not exceeding ten) who reach the highest grade in that examination, provided that grade is at least sixty-five out of a possible 100. Any further information concerning the Towne Scientific School may be obtained by addressing the Dean of the Faculty, or the Secretary, at the University.

Course, Methods, and Means of Study.—The students in the Towne Scientific School are divided into five classes—Senior, Junior, Sub-junior, Sophomore, and Freshmen.

Instruction is given by lectures and recitations, and by daily exercises in the laboratories, drawing and model rooms, which are open to the students all day, work being required of them in the afternoon as well as in the morning hours.

Instruction is made as practical as possible. In the Department of *Chemistry*, the Sophomores have a course of fully illustrated lectures, covering the whole ground of Inorganic Chemistry. In the Subjunior year their work commences in the Analytical laboratories, while they also attend lectures on Mineralogy and Metallurgy. In the Junior and Senior years, Quantitative Analysis and the making of Chemical Preparations are combined with lectures on Organic Chemistry, and practical work of metallurgical and technical subjects.

Students in *Geology* and *Mining Engineering* are trained in drawing rooms in the plotting of original field notes, contouring, making relief maps of mineral properties, constructing sections on an equal vertical and horizontal scale, converting thereby their maps into clay and plaster models, with colouring to show the structure of the country. Solid models of underground work are made to show the position of veins and beds, and the connection of these with the surface. To these are added illustrative diagrams and pictures, calculations of quantity, and whatever else is needful for the preparation of professional reports.

Students in *Civil Engineering* are instructed by recitations, lectures, and practical work, so as to develope to the best advantage the qualities required of the practical engineer. The afternoons and Saturdays are devoted to drawing and practical work in the shop, or to surveying or visiting public or private works, manufactories, &c. The *Course in Drawing* includes the projection of maps; various methods of representing Topography; conventional signs; problems in shades, shadows, and perspective; details of framing; composition; general drawings for constructions in wood, stone, and iron; special designs; working drawings for modelling; platting; and drawing of profiles and cross sections. In *visiting shops and manufactories*, students are required to collect all the practical information possible, and to embody it in a written report, noting particularly any new or special features for economising time or materials, improved methods of assembling parts, &c., as well as the general plant, apparatus, and facilities for receiving and shipping materials. The *field practice* embraces the various problems in chain surveying, the measurement of areas, and computation of results; line surveys and location, cross sections and levels for estimating quantities, hydrography, topography

with the plane table, and the solution of such Geodetic problems as relate to the orientation of maps.

Students of *Dynamical Engineering* are required to give particular attention to the kinematics of mechanism, to the conditions under which work and power act, and the means of regulating and transmitting the same; to the problems of hydraulics or hydraulic motors, and to the mechanical theory of heat with its applications to the steam engine, &c., as will appear from the detailed course of study given elsewhere. Special attention is given to the execution of drawings, first from designs and models, and afterwards from calculations; and also to the methods of casting and working in iron, and of making and using machine tools. Weekly visits of inspection will be made during two years of the course to blast furnaces, foundries, machine shops, iron and steel rolling mills.

The instruction in *Physics* extends over three complete years. In the Sub-junior year the subjects treated are Elementary Mechanics and Sound, the exercises consisting of recitations from a text-book, illustrated by experiments, with occasional lectures. In the Junior year, the subjects treated are Heat and Light, the instruction being by lectures, with recitations and examinations. In the Senior year, lectures are delivered on Electricity, and on Astronomical and Terrestrial Physics. The Senior class receives also practical instruction in the physical laboratory throughout the year. The education both of the eye and of the hand which is thus given secures familiarity with apparatus and the knowledge of methods of precise measurement.

Department of Music.

The qualifications required to enter this department are: (1) A knowledge of the rudiments of music, and (2) the ability to play on some instrument—preferably the piano or organ.

The course extends over two years. Each year is divided into three terms. The first year is devoted to Harmony, the second to Counterpoint and Composition.

Pupils who take the whole course will receive a diploma (or certificate) to that effect, if, in the judgment of the professor, their acquirements entitle them to it.

Pupils who have taken the whole course may, at any time, receive the degree of *Mus. Bac.* on the following conditions: (1) They must undergo an examination in Harmony, Counterpoint, and Composition, by three examiners appointed by the professor, subject to the approval of the Provost; the examination to be oral or written, or both, at the

option of the examiners. (2) They must also submit an original composition to the examiners, in the form of a cantata for solos and chorus, with accompaniment of at least a quintette of string instruments. It must be of such length as to require at least twenty minutes for its performance. (3) It must contain a four-part fugue, and the accompaniment must be independent except in the fugue. The composition must be accompanied by a written statement that it is their own unaided effort.

Law Department.

It is the design of this department to aid in preparing gentlemen for admission to the Bar, and, also, to offer to those who have not the Bar in view, an opportunity of acquiring knowledge in any one or all of the branches of legal learning. The conveyancer and the merchant may attend with profit the particular lectures appropriate to their respective pursuits.

Instruction is conveyed by lectures and by books and portions of books, upon the subjects of the lectures, which are recommended by the professors. The students are frequently and carefully examined. Moot courts are held, at which questions, prepared by the professors, are argued. These courts meet once a week during both terms of the annual session. A special evening is assigned to each case, so that a continuous discussion can be had of the points raised for argument. And the Law Academy of Philadelphia, an institution of long standing, to which not only students, but many practising lawyers belong, gives opportunity for debate and argument which has been found of the greatest practical advantage. The Supreme Court of Pennsylvania, the County Courts, and the Federal Courts are in session in Philadelphia during a great part of the year, so that students can have ample facilities for observing judicial proceedings.

The full *course* occupies two years.

There are two *terms* each year. The first term begins on the 1st of October, the second on the 1st of February. Each term continues four months. From the 1st day of June to the 1st of October is vacation. The course is so arranged that a student entering at the commencement of any October term will complete his term of study in two academical years.

The *tuition fee* for the full course with all the professors (except the Professor of Medical Jurisprudence) is 40 dols. for each term. Each professor will issue separate tickets for his own lectures to such students as do not desire to attend the full course, for such fee as he shall determine. Each student taking the full course is required also to pay, upon entering, a matriculation fee of 5 dols., which will entitle

him to a diploma (if he shall receive the degree of Bachelor of Laws), without further charge. There are no other charges made.

Students who have attended the lectures of any of the professors without taking the full course may receive from such professors certificates of proficiency. Those who have received the degree of Bachelor of Laws may attend all future lectures free of charge.

A hall has been assigned for the exclusive use of the Law Department in the University building, which will be open for the use of the students for the purpose of pursuing their studies in private, in day time, under proper regulations. The students in this department are allowed also to attend all the lectures given in the other departments —with the exception of certain special exercises in Practical Chemistry —free of charge. Some of these, especially the Lectures on English History and Literature, Rhetoric, Intellectual and Moral Philosophy, and Social Science, are of value to the lawyer, and an opportunity is thus offered, to those whose previous training has been to some extent limited, to make up the deficiency. The law students have also the free use of the University Library, under the usual regulations. The use of the Library of the Law Association of Philadelphia (which is one of the largest law libraries in the country) is also allowed to the students of law in the University at reduced rates, under proper regulations.

Degrees.—The following statute, fixing the qualifications of candidates for graduation, was adopted by the Board of Trustees in the year 1873:

In order to obtain the degree of *Bachelor of Laws* there shall be required of every candidate:

1. That he shall have attended upon the full course of instruction (both lectures and examinations) given in the Law Department, except the lectures on Medical Jurisprudence.

2. He shall have prepared and submitted to the Faculty, at some time to be fixed by them, an essay, composed by himself, on some legal subject, sufficient in merit to satisfy the Faculty of his fitness to receive the degree.

3. He shall have passed an examination at the end of each session upon the subjects of study during that session. The examination shall be conducted by the Faculty, either orally or in writing as they may determine, in the presence of such of the members of the committee on the said Law Department belonging to this Board as may choose to attend. And the members of the Board of Examiners appointed by the Courts of Philadelphia may be present at the examination if they desire to do so.

The essay required from each candidate must be handed to the Dean of the Faculty on or before the 15th day of March preceding the

Commencement. Bad spelling or bad grammar in an essay, or other evidence of the want of a good English education, will preclude a candidate from receiving a degree. The examinations required by the statute are both written and oral, and are held during the last week in May in each year. It will be noticed that no provision is made in these regulations for students entering upon advanced standing. The degree, therefore, cannot be conferred upon any one who has not actually attended the full course of two years.

Prizes.—The alumni of this department have established two prizes, one of 50 dols., called the *Sharswood prize*, and one of 25 dols., called the *Meredith prize*, to be competed for by the Graduating Class in each year for the best and second best graduating essays—the merits of the essays to be adjudged by the Faculty. A *prize* of 50 dols. has been established by the Faculty, to be given to the student in either class who shall pass the best written examination with all the professors. The answers to the questions proposed to be completed within a limited time.

Admission to the Bar.—Graduates of this department, having complied with the Rules of Court, are admitted to practice in the Courts of Common Pleas and Orphans' Court of Philadelphia.

For *Medical Department, see* "A Guide to the Medical Profession."*

The Wharton School of Finance and Economy.

Aims of the Wharton School.—The design of the instruction in this School (founded by Joseph Wharton, Esq., in 1881) is to give a thorough general and professional training to young men who are looking forward to business pursuits, and to fit them for the understanding of those scientific and economical problems which they may expect to meet in business life, besides imparting to them that discipline in business habits, and that moral training, which are the foundation of genuine success.

It is believed that such a school has become necessary (1) because young men no longer receive in large business houses that instruction in the various branches of mercantile procedure which was formerly imparted; and (2) because the problems now encountered in business life are too complex for any solution that could be furnished without a close acquaintance with the principles of economic science.

Heretofore students of this class have been obliged to content them-

* "A Guide to the Medical Profession: A Comprehensive Manual conveying the Means of Entering the Medical Profession in the Chief Countries of the World." By Edwin Wooton. Edited, and with Preface by Lyttleton Forbes Winslow, M.B., D.C.L. London: L. Upcott Gill, 170, Strand, W.C.

selves with the general culture imparted in the Faculty of Arts, and to enter upon business life with the understanding that they are to pick up the knowledge of its methods as opportunity offers. But with every increase in the complexity of business, there is less opportunity of learning in this way; and a young man may spend years in a counting-room without having acquired the knowledge requisite for the proper management of his own estate, or for the discharge of a trust, or for taking his place as a partner in a firm.

The association of this School with the University of Pennsylvania marks the purpose to connect with the special training in Economic and Mercantile Science that general culture which is as necessary to the business man as to every other useful member of society.

An appropriate degree will be conferred by the University, on the completion of the three years' course of study, and on the presentation of a satisfactory Thesis.

Terms of Admission.—Candidates for admission as full students of the subjunior year must be at least sixteen years of age, and must be prepared to pass examinations in all the subjects specified in the following list under the head A, and either those which are specified under the head B, or those under the head C.

A. Arithmetic: Thomson and Quimby's Algebra; Chauvenet's Geometry; Chauvenet's Plane and Spherical Trigonometry; Bowser's Analytical Geometry; Ancient and Modern Geography; Freeman's General Sketch of History; Composition; Haldeman's Outlines of Etymology; Lounsbury's English Language; Abbot's How to Write Clearly; McElroy's System of Punctuation; the Elements of Rhetoric; Collot's French Reader; Brégy's French Rules (part i.); Inorganic and Organic Chemistry.

B. Horace's Satires and Odes; Livy; Virgil's Æneid; Cicero's Orations against Catiline; Tacitus' Agricola, Germania, or Annals; Cicero's De Officiis or De Senectute; Arnold's Latin Prose Composition; Arnold's Greek Prose Composition; Xenophon's Anabasis (four books); Homer's Iliad (three books); Xenophon's Hellenics; Æschylus, Aristophanes, or Euripides; Thucydides (the Sicilian Expedition); Whitney's German Grammar; Whitney's or Woodbury's German Reader.

C. Schmitz' German Grammar; Storm's Immensee; Hodge's Course of Scientific German; Brégy's French Rules (part ii.); Souvestre's Un Philosophe sous les Toits; Descriptive Geometry; Mechanics; Analytical Chemistry (Qualitative); Drawing (Geometrical and Isometrical—from the flat—Freehand Sketching—Linear Perspective—Projection of Shadows—Architectural Drawing).

In exceptional cases proficiency in subjects equivalent to those required may be accepted by the Faculty.

Candidates who have passed through the Freshman and Sophomore classes in either the Department of Arts or the Towne Scientific School will be admitted as full students without examination. Other applicants for admission will report to the Dean on the 16th day of June at 9 o'clock A.M. Those who desire to enter as full students will pass on that and the following days the examinations for admission, beginning with those for the Freshman class, which are held June 16-18th. A second examination of candidates will be held before the opening of the academic year, in September. Special students, not candidates for a degree, will be admitted to the studies of this School without being required to pass the examinations for admission exacted of full students, provided the Faculty are satisfied that they possess the elements of a good English education, and are able to profit by the course of instruction. They shall pursue all those studies which the Faculty shall require of them. Persons who are desirous of prosecuting any special study in any department of this School can make arrangements for that purpose with the professor in charge of that department, subject to the approval of the Faculty.

The *fees* for instruction in the Wharton School are 150 dols. a year, or 50 dols. per term, payable in advance to the Treasurer of the University at the beginning of each term. The graduation fee is 20 dols.

The School is open to those students from the public grammar schools who have gained the prize scholarships in the Towne Scientific School, after they have passed through the Freshman and Sophomore classes.

Course, Methods, and Means of Study.—The students in the Wharton School are divided into three classes: Subjunior, Junior, and Senior. Instruction is given by recitations and lectures, and through original research under the direction of the professors. A portion of the studies are of a general nature, covering those branches of literature, history, language, and physical science, which are requisite to a liberal education. The rest are specially adapted to the purposes of the School. The University possesses what is believed to be the largest and most complete library of works on economic science that is to be found in any educational institution of the world. The foundation was laid by the great collection of the late Stephen Colwell, comprising between seven and eight thousand volumes, and including nearly every important book in this science in the English, French, and Italian languages, besides many in German. This has been supplemented (1)

by the gift from Mr. McCalmont, of London, of a collection of some three thousand English pamphlets, covering the period from the close of the seventeenth century till our own time, and bound in chronological order; (2) by the bequest of the library of the late Henry C. Carey, including many works and pamphlets which appeared since Mr. Colwell's death, and especially rich in statistical literature, European governmental reports, and the like.

Course of Study.—The following is an outline of the course of study pursued in the Wharton School; but is subject to modification and enlargement as experience may suggest.

Subjunior Year.—Social Science: E. Peshine Smith's Political Economy; Thompson's National Economy; Johnston's History of American Politics. *Mercantile Practice*: Oral instruction in business procedure, in the management of trusts, and in the routine of banking. *English*: The Critical Reading of English Authors. *German*: Lessing's Nathan der Weise; der Mensch und die Natur. *French*. *Physics*: Mechanics, including Hydrostatics, Pneumatics, and Sound. *Mineralogy*: General description of Minerals and Crystallography. *Latin* (elective with Drawing): Smith's Principia Latina (part i.), and Cæsar. *Drawing* (elective with Latin): Freehand Drawing, and Drawing from the Flat.

Junior Year.—Social Science: (1) History and Functions of Money; International Balance of Trade; Theory and Practice of Banking; the Credit System; Monetary Crises and Panics; the Stock and Bond Market. (2) Municipal, State, and National Taxation; the Management of Revenue; Sinking Funds; Methods of Taxation, and their moral and social influence (Direct and Indirect Taxes, Land Taxes, Taxes on Corporations, Internal Revenue Taxes, and Duties on Imports); the relation of Wars and Military Systems through taxation to National Industry; the Handling of Public Debts. (3) Industry, Commerce, and Transportation; the national necessity for a Balance of the great Industries; National Self-defence in the development of the Industries. (4) Wage Questions; the relations of Capital and Labour; Strikes and Lock-outs; Harmony and Discord. *Mental and Moral Science*: Atwater's Logic; Whewell's Elements of Morality. *English*: Compositions and Exercises in Elocution. *Geology*: Elements of Geology; Descriptive and Determinative Mineralogy; Metallurgy. *Physics*: Heat and Light. *Latin*: Cicero's Epistolæ, De Senectute, &c. (Long's edition); Virgil's Georgics. *German*: Schiller's Wilhelm Tell; Goethe's Hèrmann and Dorothea; Translations into German; Whitney's German Grammar. *French*.

Senior Year.—Law: Elementary Law; Mercantile Law (Law of

Partnership, Law of Common Carrier, Licence Laws, Land Laws, &c.); Constitutional Law of the United States and of the Commonwealth of Pennsylvania; the Rules of Order in Public and Corporation Meetings. *Social Science*: (1) Lectures on Living Issues (Land, Labour, Monetary Questions in their Popular aspects, Socialism and Communism, Free Trade and Protection, Charity Organization, Popular and Industrial Education); (2) Mulford's Nation; (3) Original Research in the theory and history of economical questions, under direction of the professor. *History*: Lectures on Modern and Mediæval History; Guizot's History of Civilization in Europe. *English*: Composition and Exercises in Elocution. *Physics*: Electricity; Practical and Astronomical Physics. *Astronomy*.

Any further information may be obtained by addressing the Dean of the Faculty, or its Secretary, at the University.

The College of New Jersey.

Regulations of the Course.

The whole course of study requires four years; one year in each of the four classes into which the students are divided. The entrance, standing, and graduation of every student are determined by examinations at the times and upon the conditions here specified.

Entrance Examinations.—Examinations for admission will be both oral and written. Examinations at other times than those specified are very inconvenient and often impracticable, and applicants for admission at other than the regular days are required to pay 10 dols. into the treasury. *Subjects*: Candidates for admission to the Freshman Class are examined in the following books and subjects: *English*: English Grammar (Whitney's); Orthography; Punctuation; Short and Simple English Composition; Geography (Ancient and Modern); United States History (Scott's). The attention of preparatory schools is called to the need of a more thorough study of elementary English. *Latin*: Latin Grammar (including Prosody); Cæsar (five books of the Commentaries); Sallust (Catiline or Jugurtha); Virgil (six books of Æneid); Cicero's Select Orations (six); Arnold's Latin Prose Composition (twelve chapters). *Greek*: Greek Grammar (including Prosody); Xenophon (three books of the Anabasis); or Greek Reader (Goodwin's, 111 pages); Homer (the first two books of the Iliad, except the Catalogue of the Ships); Greek Composition (thirty exercises of Jones or Arnold, with special reference to writing with the accents); Goodwin's, Hadley's and Crosby's Grammars are recommended. The Continental pronunciation of the vowels and diphthongs in both Latin and Greek is preferred. *Mathematics*: Arithmetic (including the

metric system); Algebra (through quadratic equations of one unknown quantity); Geometry (first book of Euclid). Equivalents will be received in place of the books named above; but it is recommended that the candidates be prepared for examination on the requirements above specified. Candidates for admission to any class higher than the Freshman are examined in the previous studies of the class which they wish to enter, as published in the last annual Catalogue, or their equivalents. Applicants for admission to the Sophomore Class are also examined in the preparatory studies. Applicants for admission to the Junior or Senior Class, *coming from another College*, are examined only in the studies of the year preceding that which they wish to enter. While it is important that the applicants should have studied French, Physiology, and Natural History, an examination in these studies is not required.

Conditions.—No person is admitted to the College as a candidate for the degree of *Bachelor of Arts* after the beginning of the first term of the Senior year. All candidates for admission to any class must bring with them testimonials of moral character; and if the candidate has been a member of another college or university, he must produce a certificate from the president or faculty that he is free from censure in that institution. No candidate is admitted into the College without an examination and a vote of the Faculty.

Annual Examinations.—At the close of the College year each of the four classes is publicly examined in all its studies of that year. The annual examinations are conducted both orally and in writing. The results of the Annual examinations are combined with those of the previous Sessional examinations to determine the average grade of the student for the year. Should the average grade of a student prove him unqualified to go forward with advantage in his class, his name is struck from the roll and he cannot be admitted to re-examination at the beginning of next term, except by a vote of the Faculty.

Biennial Examinations.—At the close of the second year of the course, the Annual examination of the Sophomore Class includes the studies of the Sophomore year, together with such studies of the Freshman year as may be prescribed in the several Departments. Members of the Sophomore Class, found deficient in any study at their examination, are conditioned and re-examined in that study before they are allowed to proceed to the Elective Courses of the Junior year.

Elective Courses.—For the last two years of the course students have an opportunity of selecting to a certain extent the studies which they will pursue. These elective studies, chosen at the beginning of the college year and for the entire year, will, when chosen, be equally obli-

gatory with the required studies. On the second day of the first term, at twelve o'clock, the members of the Junior and Senior Classes meet in the Chapel to declare in writing their choice of elective studies and to be enrolled in the several Departments. In the Junior year students must take two of the following five electives: Latin, Greek, Mathematics, French and German, and Anglo-Saxon. In the Senior year they must take four of the following eleven electives: Latin, Greek, Mathematics, Astronomy, Physics, History, Chemistry, History of Philosophy, French and German, Political Science, Museum Work.

Final Examinations.—Bachelor's Degree.—At the close of the whole course of study the members of the Senior Class are publicly examined for admission to the degree of Bachelor of Arts on the studies of the Senior year. No student will be recommended to the Trustees for a degree who fails to pass a satisfactory Final examination. A student whose grade at his Final examination is below fifty in any department will forfeit the title to a degree, and it can only be restored by express vote of the Faculty upon sufficient reasons given. These rules shall not be rendered inoperative by the length of time a student has been a member of the College. The Final grade of a student is the average of all the Annual grades received by the student during his college course. Students whose Final grade is above fifty are ordinarily recommended by the Faculty for the degree of Bachelor of Arts, and if the recommendation is approved by the Trustees, they receive diplomas signed by the President and the Clerk of the Board of Trustees. Commencement Orations, indicative of general or special excellence, are awarded by the Faculty to such students as are deemed worthy of distinction. The Latin Salutatory is ordinarily awarded to the student who stands first in the class; and the English Salutatory to the student who stands second. The Valedictory is awarded with special regard to the qualifications of the student as a Valedictorian, as well as on the ground of scholarship. Philosophical, Classical, Mathematical, Physical, Metaphysical, Ethical, Historical, Literary, Belles Lettres, French, and German Orations and Theses are awarded to students who are eminent respectively in the corresponding Departments. In awarding all literary honours and distinctions regard is had by the Faculty to the moral conduct of the candidates.

Post-graduate Courses.—Provision has been made for courses of instruction open to resident graduates of this and other colleges. *Graduate Course in Biology*: It has been decided to establish a thorough graduate course in Biology, the objects of which are, first, to foster a spirit of original research, and second, to qualify advanced students to become teachers. *Regulations of the Course in Biology*:

1. The Courses leading to a degree are open only to graduates of this and other colleges, or to students presenting diplomas from recognised medical schools. Other students may attend the lectures and laboratory work, but will not be eligible for a degree. 2. At the close of the first term, the student may select a department of special study for his Thesis. This Thesis should present the results of original work pursued under the direction of the instructor. If the student pass all his examinations at the close of the year and his Thesis be satisfactory to the Board of Instructors, he will be entitled to the degree of Master of Science (M.Sc.). Attached to the diploma will be a statement that the degree has been awarded for proficiency in Biology. 3. The Theses which are accepted as giving title to a degree, on the recommendation of the Board of Instructors, will be published in the Bulletins or Memoirs of the E. M. Museum. 4. In addition to receiving his degree, the student may at the close of the year be enabled to pursue his study at the seaside or in the West should the projects for summer work be carried into effect. 5. The annual *fee* will be 40 dols., together with an additional charge for material actually consumed in the laboratories (say 10 dols.).

Degrees of A.M. and Ph.D.—Bachelors of Arts devoting one year exclusively to study in the College, under the care of the Faculty, and passing rigid examinations in the studies pursued, are entitled to apply for the degree of A.M., two years after taking the First degree. Those taking at least one post-graduate course each year for two years, and passing examinations on the same, are entitled at the close of the two years to apply for the degree of A.M. Those pursuing the learned professions, including teaching, are entitled to apply for the degree of A.M., three years after graduation. Those not pursuing the learned professions (including teaching) are entitled to the degree of A.M., three years after graduation, provided they shall have submitted, in manuscript or print, on or before May 1st of the year in which they shall seek the degree, a literary, philosophical, or scientific paper to a Committee appointed by the Board of Trustees, who shall report thereon to the Board. A Bachelor of Arts who has devoted all his time to a two years' post-graduate course in the College, taken a prescribed course of special reading, passed a rigid examination on subjects studied, and presented a thesis giving evidence of original research and high attainment, may apply for the degree of Doctor of Philosophy. The above courses of study are open to graduates of other colleges whose course of study is equivalent to that of the College of New Jersey, or who shall pass such examinations as the Faculty may require.

There is a graduate course in Palæontology.

Annual Prizes and Fellowships.

Besides the degrees and honours conferred in the regular course, prizes, scholarships, and fellowships are offered as special incentives to study, in the classes or departments with which they are connected. Only matriculated students who are candidates for a degree are admitted to the competition for prizes, scholarships, and fellowships, and none are admitted to such competition who have failed to pass satisfactorily their last preceding examination in any of the departments. No member of any class is allowed to compete for more than one of the scholarships or fellowships offered to that class. The names of the prizemen, scholars, and fellows of each year are included in the Honour List for the year.

Prizes and Scholarships.—The *Junior Orator medals*: Four gold medals, or books of equal value, are awarded by a committee appointed by the Board of Trustees, to the four successful competitors in an Oratorical contest on the evening before Commencement. The *Lynde prizes*: Three prizes—one of 130 dols., one of 120 dols., and one of 100 dols.—the income of 5000 dols., contributed by Charles R. Lynde, Esq., will be awarded by a committee appointed by the Faculty to the three successful competitors in a Debate on the Monday evening preceding Commencement. The *George Potts Bible prizes*: The yearly interest of 1000 dols., expended in the purchase of two copies of Matthew Henry's "Commentary on the Bible," is presented to the two best Biblical scholars of the Senior Class at the end of their College course. The *Dickinson prize*, consisting of a medal of the value of 60 dols. (or its equivalent in money), is awarded to that member of the Junior Class who shall write the best dissertation upon a given subject. The *Class of* 1859 *prize*: The interest of 2000 dols. is given to the member of the Senior Class who shall write the best essay on a given subject, and pass the best examination on an announced author or work. The essay must be handed in on or before June 1, and the examination is held in June. The *Class of* 1861 *prize*: The interest of 1200 dols. is awarded to that member of the Sophomore Class who shall pass the best examination in June on those portions of the Mathematical course of the Sophomore year which shall be specially designated by the Professor of Mathematics. The *Freshman First Honour prize*: A prize of 200 dols., to be paid in quarterly instalments during the following year, is awarded to that member of the Freshman Class who, having entered said class at the beginning of the College year, shall, at the end of such year, be reported to the Trustees by the Faculty to have attained the highest average grade in scholarship, provided he pursue his studies in this College, and main-

tain a good standing during the Sophomore year. No student who has been suspended from College, or who has been put upon his last probation, is eligible to this prize. *Science and Religion prize*: A medal of the value of 100 dols. (or its equivalent in money), is awarded to that member of the Senior class who shall pass the best examination in the department of the Harmony of Science and Revealed Religion, and write the best Essay on Premature Alliances between Science and Religion. The *Baird prize*: Through the liberality of Charles O. Baird, Esq., the following prizes are distributed in the Senior Class, viz.: The Baird Prize of 100 dols. to the student adjudged to be the best writer and speaker; a Prize for Oratory of 50 dols. to the next best writer and speaker; and a prize of 50 dols. for the best Poem, and of 50 dols. for the best written disputation delivered at the public Oratorical Exercises of the Senior Class. These prizes are awarded by the Professors in English Literature, Rhetoric, and Oratory, or under their direction. Their decision with reference to the Baird Prize and the Prize for Oratory may be based upon the work done in Composition and Oratory in their respective departments during the last three years of the College Course. The *Miss Stinnecke scholarship*: The sum of 200 dols., the income of a legacy of Miss Maria Stinnecke, is awarded to the member of the Junior Class who receives the highest grade for the Junior year.

Fellowships.—No student is allowed to compete for more than one of the fellowships. Every competitor must have been a member of the College in full standing for at least two academic years previous to the Fellowship examinations. Every fellow obtaining any one of the 600 dols. fellowships must devote his whole time for one year to study in the department for which the fellowship is provided, under the direction of the professors in that department. He must reside in Princeton, and pass two rigid examinations on his work, unless, by a vote of the Faculty, he be allowed to study at an approved foreign University, in which case he shall from time to time furnish written reports of his work to the professors in his department. The result of every examination and the reports of work done abroad shall be immediately reported to the Faculty. He shall be allowed to reside free of cost in one of the College buildings, in a room assigned to him by the College authorities. He shall be regarded, whilst occupying such place, as a resident officer of the College, and he shall, when called on, perform such duties in the department to which he belongs as may be assigned to him by the President at the request of the Professors in that department. The *J. S. K. Mathematical fellowship*: The sum of 600 dols., to be paid quarterly, is awarded to the member of the

Senior Class who shall stand highest at a special examination to be held in June, on the following subjects: Analytical Geometry; Differential and Integral Calculus. The *Chancellor Green Mental Science fellowship*: The sum of 600 dols., to be paid quarterly, is awarded to the member of the Senior Class who may write the best essay on "The Nature and Extent of *a priori* Principles, with Special Criticism of the Evolution Theory of Conscience" (to be given in on or before 1st June), and who may stand highest at a special examination to be held in June on the following subjects: A general knowledge of the Philosophies of Plato, Aristotle, Descartes, Locke, Hume, Kant, and Hamilton; Cicero De Officiis, chapter De Contentione Honesti et Utilis; Theoretical Ethics; Psychology and Metaphysics (M'Cosh's Intuitions, parts i., ii., and iii., book i.); the Syllogism. The *Boudinot Historical fellowship*: The sum of 250 dols., to be paid quarterly, is awarded to the member of the Senior Class who shall write the best Essay and pass the best examination on previously announced subjects. The Essay to be presented on or before 1st June. He shall, from time to time during the following year, as may be required by the Professor of History, give evidence by written papers that he is reading such a course as the said professor may approve. The *Boudinot Modern Language fellowship*: The sum of 250 dols., to be paid quarterly, is awarded to that member of the Senior Class who shall pass the best examination in June, on the following subjects: A comprehensive knowledge of both the French and German descriptive Grammars; History and development of either of these languages, their literary history and history of literature complete; Reading at sight of any given author of the classical or recent period; an essay of not less than four pages (foolscap) in the original idioms. The examination will be conducted orally and in writing. He shall from time to time during the following year, as may be required by the Professor of Modern Languages, give evidence by written papers that he is reading such a course as the said professor may approve. The *Class of* 1860 *Experimental Science fellowship*: The sum of 600 dols., to be paid quarterly, is awarded to the member of the Senior Class who may stand highest at a special examination, to be held in June. The *W. S. Ward fellowship in Economic Geology*: Competition for this fellowship is open to the Senior Class, in both the Academic and Scientific Departments, and to post-graduate students. The award will be made according to the merits of the competitors, as determined by an examination, on the subjects treated of in the courses in General Chemistry and in Geology and Palæontology of the undergraduate academic curriculum, as well as by a written discussion of the

General Characteristics of Gold and Silver Ores, and their modes of occurrence, with a consideration of the Gold and Silver Ores of the Western United States especially. The fellow thus appointed will receive the sum of 600 dols., to be paid quarterly, and will be required to spend one year in the continuous study of the mines and mining interests of Colorado, pursuing his preparatory studies under the direction of the proper professors of the College, and then visiting the mines of Colorado. Before the end of his fellowship he will be required to prepare a thesis on the geological and chemical history of certain mines in Colorado.

General College Orders.

Every undergraduate student is expected to reside in the College buildings unless excused by the Faculty, and is required to attend all College exercises in the Chapel, to be present during the lectures and recitations of his class, and to avail himself of the privileges of the Library and Gymnasium upon the conditions and at the hours appointed.

Terms and Vacations.—The college year is divided into three terms or sessions. The *first* term of the college year begins about the 14th of September, and ends about the 21st of December. The *second* term begins about the 4th of January and ends about the 12th of April. The *third* term begins about the 19th of April, and ends about the 21st of June. Students are required to return to College on the first day of each term, and absences from any College exercise at the beginning of a term affect a student's standing in the same manner as absences at any subsequent period. Students are not allowed to leave College during term time without express permission obtained from the officer of the class to which they belong.

SCHEDULE OF COLLEGE EXPENSES.

	First Sess. 14 weeks. Dols. Cts.	Second Sess. 14 weeks. Dols. Cts.	Third Sess. 9 weeks. Dols. Cts.
Board, 3 dols. to 6 dols. per week.			
Washing, 50 cents. per week	7 00	7 00	4 50
Tuition, Academic	30 00	30 00	15 00
,, School of Science	45 00	45 00	30 00
Room rents (see list.)			
Fuel deposit—			
Reunion Hall, double rooms, each occupant	4 00	6 00	—
,, ,, single rooms	5 00	8 00	—
Edwards Hall and North College, single rooms	6 00	11 00	—
North, East, and West, double rooms, each	4 00	7 00	—
Witherspoon Hall, double rooms, each	5 00	8 00	—
,, ,, single rooms ...	7 00	14 00	—

SCHEDULE OF COLLEGE EXPENSES—(*continued*).

	First Sess. 14 weeks. Dols. Cts.	Second Sess. 14 weeks. Dols. Cts.	Third Sess. 9 weeks. Dols. Cts.
Gas Deposit—			
Reunion, East and West, double rooms, each occupant	6 00	8 00	4 00
Reunion Hall and Edwards Hall, single rooms	9 00	10 00	5 00
Witherspoon Hall, double rooms, each occupant	7 00	9 00	5 00
,, ,, single rooms	10 00	12 00	6 00
Public rooms	10 00	10 00	8 00
Chem. and Philos. app. (Academic Seniors only)	2 50	2 50	—
Sch. Science, App. deposit—			
Seniors, Juniors and Sophomores, B.S.	10 00	5 00	—
Freshman, B.S.	—	4 00	—
Sophomores, C.E.	8 00	7 00	—
Freshmen, C.E.	—	5 00	—
Matriculation fee, payable on entrance	5 00	—	—
Commencement expenses and Diplomas	—	—	12 00

Necessary Expenses.—The following is an approximate estimate of the necessary annual expenses for a student occupying a room in College, without including clothes, travelling expenses, and board in vacations :

	Dols.	Dols.
Board, 38 weeks (3 dols. to 6 dols.) from	114 to	228
Washing	19 to	19
Tuition, room, &c.	140 to	303
Lights (kerosene and gas)	6 to	25
Books	15 to	25
	294	600
Deduct for students on scholarships	75	
	219	

Pecuniary Aid.—A limited number of students of good moral character, intellectual ability and promise, needing assistance, are aided in their efforts to obtain a liberal education, by means of endowed scholarships, which discharge the amount of their tuition fees. Application for admission to these scholarships, as they become vacant, should be made to Professor Atwater. The College also possesses a fund given for the purpose of aiding indigent candidates for the Ministry of the Presbyterian Church, from which they can receive at least 30 dols. a year each.

The John C. Green School of Science.

This institution, endowed by Mr. John C. Green, is a department of the College of New Jersey. It is established for the purpose of giving

a thorough training in general science and art, together with a liberal education in certain academic studies. Provision is also made for the special pursuit of certain studies of the general course and of the professional course of Civil Engineering. The students in this School are regularly engaged in the laboratory, drawing room, museum and field, and make excursions to different points of interest. For graduates and advanced students, and those desiring to pursue special branches, every facility will be supplied for study and research. Two courses in general science are provided. The one is a course of four years, to be pursued by candidates for the degree of Bachelor of Science (B.S.): the other is a course in special departments of Science, to be pursued by students who have received the degree of Bachelor of Arts, or of Science, and are candidates for the degree of Master of Science (M.S.).

Terms of Entrance.—Candidates for admission to the Freshman Class must be at least sixteen years of age, and bring satisfactory testimonials of moral character. They will be examined in the following books and subjects: *English*: Orthography; Punctuation; English Grammar; Simple English Composition; Geography, Ancient and Modern; U.S. History (Scott). *Mathematics*: Arithmetic entire, including the metric system, a practical knowledge of which is indispensable; Algebra through quadratic equations of one and two unknown quantities, including evolution, radicals and theory of exponents—Geometry, Plane Geometry *entire* (five books of Chauvenet or their equivalent). In preparing for this examination it is recommended that Chauvenet's Geometry be studied, as that is the text book used here, but an equivalent in other books will be accepted. *Latin*: Five books of Cæsar's Commentaries, with especial attention to the Grammar, including Parsing.

Bachelor of Science.—The course of study for this degree occupies four years, as follows; the bracketed figures indicating the number of exercises devoted to each subject: *Freshman Year*: *First Term*: *Mathematics*: Algebra completed (Wells'), (65). *English*: Rhetoric (Hart's); Diction and Sentences; Essays (13). *Modern Languages*: German; Otto's Grammar, to Lesson xxxii. inclusive, with oral and written exercises, (65). *Botany*: Flowering Plants; Vegetable Histology (Bessey's Botany), (30). *Drawing*: Elements of Industrial Drawing (35). *Oratory*: Elocution. *Second and Third Terms*: *Mathematics*: Plane and Solid Geometry (Chauvenet); Mensuration; Plane Trigonometry (95). *English*: Rhetoric (Hart's), Figures, Special Properties of Style, Poetry, Versification (19). *Modern Languages*: German; Otto's Grammar, reviewed and completed; Translations in Otto's Reader combined with conversational exercises; French;

Grammar—as far as the Irregular Verbs inclusive, with oral and written exercises (95). *Botany*: Flowerless Plants; Herbarising (Bessey's Botany); Gray's Manual of Botany (35). *Drawing*: Projections and Descriptive Geometry (60). *Oratory*: Elocution. *Sophomore Year*: *First Term*: *Descriptive Geometry* (36). *General Chemistry*: Inorganic (26). *Mineralogy*: Descriptive and Determinative (52). *Human Anatomy and Physiology* (13). *English*: Lectures, Essays (13). *German*: Hodge's Course in Scientific German, part i. *French*: Reviewing the course of the previous year; Grammar completed; Syntax; Modern Languages (52). *Mathematics*; Spherical Trigonometry (16). *Second and Third Terms*: *Mathematics*: Analytical Geometry (Loomis); Surveying (76). *Descriptive Geometry*: Shades, Shadows and Perspective (15). *General Chemistry*: Inorganic (38). *Analytical Chemistry*: Qualitative Analysis (76). *English*: Study of Words (Trench's); Essays (19). *German*: Hodge's Course in Scientific German (part ii.), combined with translations from Scientific English into Scientific German. *French*: Syntax completed; Keetels's Analytical French Reader, embracing translations from French into English and from English into French, and conversational exercises (Modern Languages, 76). *Oratory*: Lectures, Exercises, and Personal Drill in Elocution. *Junior Year*: *First Term*: *Mathematics*: Differential and Integral Calculus (65). *Physics*: Elementary Mechanics; Properties of Bodies; Acoustics (52). *Analytical Chemistry*: Quantitative Analysis.* *Zoology*: Vertebrata (Packard's Zoology; Balfour's Comparative Embryology (13). *English*: Manual of Literature (Craik), with Lectures (13). *Modern Languages*: German—Lessing; French—Racine (39). *Logic* (26) or *Psychology* (13). *Drawing*: Free-hand (13). *Oratory*: Lectures and Criticism on Oratorical Composition and Delivery. *Second and Third Terms*: *Mechanics*: Rational Mechanics of Solids and Fluids (76). *Physics*: Heat; Light; Electricity and Magnetism (57). *Analytical Chemistry*: Quantitative Analysis.* *Zoology*: Vertebrata (19). *English*: Manual of Literature (Craik), with Lectures (19). *Modern Languages*: German—Schiller, Goethe; French—Molière, Corneille (57). *Logic* (10) or *Psychology* (19). *Geology* (38). *Drawing*: Freehand (19). *Senior Year*: *First Term*: *Astronomy*: General and Practical (26). *General Chemistry*: Applied (13). *Analytical Chemistry*: Quantitative Analysis.* *Biology* (13). *English*: Lectures on English Literature (13). *Modern Languages*: German—Goethe, History of Literature; French—Reading Scientific Prose at sight, History of Literature (39). *Oratory*: Reading of Essays on Scientific subjects. *Second*

* Varie cording to elective studies also taken.

and Third Terms: *Astronomy*: General and Practical (18). *Physics*: Practical in the Laboratory (18). *General Chemistry*: Applied (18). *Analytical Chemistry*: Quantitative Analysis.* *Biology* (18). *Physical Geography* (36). *English*: Lectures on English Literature (18). *Modern Languages* (45). *Political Economy* (36). Before receiving his degree, every student must present an acceptable Thesis or Essay to the Faculty.

Master of Science.—Bachelors of Science who shall have devoted one year in this College exclusively to the study of such of the following subjects as the Faculty shall prescribe, and who shall have shown satisfactory proficiency therein by dissertations and examinations, may apply for the degree of Master of Science (M.S.): Biology, Mathematics, Rational and Applied Mechanics, Practical Astronomy, Applied Chemistry, Qualitative Analysis, Physics, Mineralogy, Drawing, Modern Languages (one or more), Dissertations on Scientific subjects. Any Bachelor of Arts, who after examination may be found to be prepared to pursue a post-graduate course in Science, may become a candidate for the degree of Master of Science on the same conditions as a Bachelor of Science.

Doctor of Science.—A Bachelor of Arts or of Science, who has devoted all his time to a two years' post-graduate course in the College and passed rigid examinations on the subjects studied, and presented a Thesis containing the results of original research, may apply for the degree of Doctor of Science.

Elective Studies.—During the Junior year students desiring to devote to certain branches more time than is allotted to them in the general course may elect one of three courses providing special instruction in: Mathematics and Mechanics, Biology and Geology, Chemistry and Mineralogy. The choice must be fixed for the remainder of the course and before the end of the first term. The extra time devoted to one branch will be taken from that allotted to other scientific studies. In the Senior year students may pursue a Select course in Physics, but those who propose to take this course must pursue the general course during the Junior Year or elect the course in Mathematics and Mechanics. Students pursuing such elective courses will remain candidates for the degree of Bachelor of Science, and will be required to produce a satisfactory thesis on some subject assigned by the professors in charge, before receiving their degree.

Course in Chemistry and Mineralogy.—During the first term of the Junior year students electing this course will pursue the regular schedule of studies for the General course in Science. During the

* Varies according to elective studies also taken.

second and third terms of the Junior year the hours occupied by Mechanics in the General Course will also be devoted to the studies of this Elective Course, and during the Senior year the exercises allotted to Physics, Physical Geography, Biology, and one-half of those allotted to Modern Languages, will be given to the special work of this Elective Course, which is designed to afford full instruction in Analytical and Technical Chemistry, and will include the following studies: *Qualitative Analysis*, Inorganic and Organic, including Blowpipe Analysis; *Quantitative Analysis*, Inorganic and Organic, including Volumetric Analysis; *Applications of Chemistry* to Medicine and Hygiene, including Toxicology, Water Analysis, Adulterations of Foods, Disinfectants, &c.; *Mineralogy*, including the optical study of Minerals; *Lithology*, with microscopical examination of rocks; *Technical Chemistry*: Lectures; *Assaying*.

Course in Biology and Geology.—The special studies of this course begin with the second term of the Junior Year, and include the following subjects: *General Course of Zoology*, during Junior and Senior years, including Embryology and Osteology; 149 lectures. *Practical Anatomy and Histology* during Junior and Senior years; 114 lectures. *Physiology*: Senior year; 35 lectures. *Geology*: Junior year; 36 lectures. *Physical Geography*: Senior year; 36 lectures. *Palæontology*: Senior year; 35 lectures.

Civil Engineering.—This department of the School of Science, endowed by Mr. John C. Green, is designed to furnish its graduates with complete preparation for entering the profession of Civil Engineering. The regular course of study will occupy four years, and the degree conferred on graduates of this department will be that of *Civil Engineer* (C.E.). As shown in the following distribution of studies, this course diverges from that in General Science from the beginning. It is desirable, therefore, that applications for admission to the department of Civil Engineering be made immediately after matriculation; otherwise, the applicant, when admitted, may find it difficult to make up the practical work engaged in by his class previous to his admission. During the first three years the course of study will be the same for all candidates for the C.E. degree, but during the Senior year those students in full standing, who in the opinion of the professor in charge may have shown marked tastes for and proficiency in any special branch of Civil Engineering, may be allowed to depart from the regular course, to a limited extent, in order to pursue more fully their favourite studies. The following is a synopsis of the distribution of studies: *Freshman year*: *Mathematics, English, Modern Languages, Mineralogy*, and *Geometrical Drawing*, the same as for the degree of Bachelor of

Science. *Geodesy*: Chain and Compass Surveying (theory and practice) (30). *Topographical Drawing*: Elements of Pen Topography (35). *Sophomore year*: *Mathematics, Descriptive Geometry, Chemistry, English, Modern Languages*, the same as for the degree of Bachelor of Science. *Geodesy*: Adjustment of Field Instruments; Levelling; Triangulation; Topographical Surveying (42). *Stereotomy*: Structure Drawing (20). *Topographical Drawing*: Finished Maps of Surveys; Elements of Coloured Topography (65). *Junior year*: *Mathematics, Mechanics, Physics*, and *English*, the same as for the degree of Bachelor of Science. *Geodesy*: Hydrography; Town, Plane Table and Mine Surveying (60). *Stereotomy*: Machine Drawing; Cinematics, Structure Drawing (28). *Topographical Drawing*: Contour Maps; Hydrographic Charts; Town Maps; Plans and Profiles of Mines; Maps of Landscape Surveys (65). *Senior year*: *Astronomy, Physics* (*elective*), and *English*, the same as for the degree of Bachelor of Science. *Applied Mechanics*: Elasticity and Strength of Materials; Theory of Stresses in Roofs and Bridges; Stability of Walls and Arches; Practical Hydraulics (137). *Machines*: General Theory; Hydraulic Motors; Theory of Steam and Air Engines (60). *Constructions*: Materials of Structures; Dressing and Preservation of Materials; Foundations; Details of Roofs and Bridges; Construction of Roads, Railroads, Canals, and Tunnels; Harbour and River Improvements; Water Supply and Drainage (80). *Geodesy*: Preliminary and Final Surveys of Routes; staking out for construction; Problems in higher Geodesy (45). *Stereotomy*: Stone Cutting (theory and plates) (25). *Topographical Drawing*: Preliminary and Final Drawing of Routes (25). It will be noticed that the above list of studies does not provide for regular instruction in the Modern Languages after the Sophomore year. It is, therefore, necessary to explain that a partial equivalent for such instruction has been provided by the use of French and German books of reference in some of the technical courses of the Junior and Senior years. Every candidate for this degree will be required to prepare and submit to the approval of the professor in charge of the department a design for, or a review of some special machine, structure, or process as a graduating Thesis before receiving his degree.

Special Students.—For graduates or others who desire to devote especial attention to any of the scientific studies of the School, arrangements can be made with the professors of those branches, if the professor in charge shall, after due investigation, decide that the applicants can pursue such studies with advantage. Every facility will be offered for their advancement in the studies selected, with the

personal supervision of the professor and full access to the collections, &c.; but it must be distinctly understood that this opportunity is intended only for those who desire to attain proficiency in special branches, and not for students who have failed to keep up with the regular classes. Special students will be required to give evidence of satisfactory progress in their studies. To those passing successful examinations in the branches selected certificates of proficiency will be given. The branches open to special students include: Geology, Mineralogy, Biology, Physics, Analytical and Applied Chemistry, Assaying, Topography. A course of two to four months, according to the previous preparation of the students, is provided for post-graduates and special students intending to study Medicine. It includes a selected course in Qualitative Analysis, Physiological Chemistry, Disinfectants, Analysis of Potable Waters, &c., and consists mainly of laboratory work and microscooical investigations.

Expenses.—The *tuition fee* for all the courses for regular degrees is 120 dols. per annum, to which will be added room rent, fuel, &c., the same as in the Academic Department. For the special courses in Analytical Chemistry the *fee* is at the rate of 120 dols. per annum. For other special courses arrangements will be made with the professors in charge. Every student will be required to make a deposit to pay for materials consumed and apparatus injured or destroyed. At the end of the year any excess in his favour will be returned to him. The deposits will be: For candidates for B.S.—Seniors and Juniors, 15 dols.; Sophomores, 20 dols. For Civil Engineers—Sophomores, 8 dols. For elective course in Chemistry and Mineralogy—Seniors, 35 dols.; Juniors, 25 dols.

Terms and Vacations.—These are the same as in the Academic Department.

Buildings, Apparatus, and Collections.—The School of Science building contains large and commodious lecture and recitation rooms for each department of study, with chemical, physical, mineralogical, engineering, assay and biological laboratories, museums, drawing and photographic rooms, besides the private rooms of the professors. The laboratories are supplied with all the apparatus requisite for the study of the highest branches of science. The museums comprise full collections for the study of Geology, Mineralogy, Biology, and Chemistry.

ADDENDA.

SECTION I.

Oxford University—Oxford Local Examinations—Association for Promoting the Higher Education of Women in Oxford—Girton College, Cambridge—Newnham College, Cambridge.

Oxford University.

Details of the Honours courses for the First and Second Public examinations, to which reference is made at pp. 35-6, are here supplied:

First Public Examination of those who seek Honours in Classics.

1. *Time.*—The examination is held twice a year, and begins on the same days as the examination of those who do not seek Honours.

2. *Candidates.*—The preliminary conditions are the same as are required from those who do not seek Honours, with the exception that they must have entered upon their fifth and not have exceeded their eighth term from the term of their Matriculation inclusively.

3. *Subjects.*—(1) *The Four Gospels in Greek*: This part of the examination differs in no respect from that of those who do not seek Honours, and every candidate who objects on religious grounds to an examination in the Gospels may, in the same way, after having delivered the required statement to the Proctor, offer instead thereof any one of the Greek books which may be offered by those who do not seek Honours, provided that it is not the same as that in which he satisfied the masters of the Schools (or the examiners whose certificates are accepted in lieu of the Testamur of the masters of the Schools), or as any one of those which he offers for Honours, or which, in the case mentioned below, he has previously offered. A candidate who fails to satisfy the Moderators in either the Gospels or the substituted subject may, notwithstanding, be placed in the Class-list, and may offer himself for examination in the Gospels, or the

substituted subject, in any subsequent term: but he cannot offer himself for any part of the Second Public examination until he has satisfied the Moderators in this part of the First Public examination.

(2) *Greek and Latin Literature.*—The following are the regulations of the Board of Studies, subject to modifications: i. All candidates for Honours will be examined, and must satisfy the Moderators, in the following subjects: (*a*) Translation of unprepared passages, both Greek and Latin. (*b*) Latin Prose. (*c*) Greek and Latin authors to be selected from the list put out by the Board of Studies, and under the conditions published therewith. The minimum number which will be accepted of such authors is five. Grammar questions, and questions directly bearing upon the contents, style, and literary history of the books offered, will be considered an essential part of the examination. ii. Papers will also be set in the following subjects: (*a*) Greek Prose. (*b*) Latin Verse. (*c*) Greek Verse. (*d*) The elements of Comparative Philology, especially as applied to the illustration of Greek and Latin inflexions. (*e*) Aristotle's Poetics, excepting chapters xx., xxv. (Vahlen's text); with either the History of the Greek Drama, or the History of Roman Poetry to the end of the Augustan age. (*f*) The elements of Deductive Logic, with either Magrath's Selections from the Organon, sections 3-6, 22-33, 36-47, 50-53, 61-66, 68 and first paragraph of 69, 105-112, 118-127 (all inclusive), or such portions of Inductive Logic as are contained in Mill's Logic, book iii., ch. i.-iv., vi.-viii., x.-xii., and xx. Every candidate will have the opportunity of doing all these papers, but deficiency in or omission of one or more of them will be no bar to the attainment of the highest Honours, if compensated by the quantity of the other work offered by the candidate or the general excellence of his papers. Candidates are recommended to take up not more than two of the subjects (*d*), (*e*), and (*f*), and not less than two if they omit any of the Composition papers. But this regulation is not intended to discourage a candidate from taking up a third subject to compensate for the omission of one or more of the Composition papers, though at the same time it is not implied that in such cases a third subject is necessary to the attainment of the highest Honours.

List of Authors—Greek: 1. Homer, four alternatives—Iliad i.-xii.; xiii.-xxiv. Odyssey i.-xii.; xiii.-xxiv. (Dindorf's text). 2. Demosthenes—De Corona (Baiter's text). 3. Æschylus—The Trilogy, or any four plays including the Agamemnon (Dindorf's text, ed. 1851). 4. Sophocles, any three plays (Campbell's text). 5. Euripides, any four of the following plays—Bacchæ, Hippolytus, Ion, Iphigenia in Tauris, Medea, Phœnissæ (Dindorf's text). 6. Aristophanes, any three of the

following plays—Acharnenses, Aves, Equites, Nubes, Ranæ, Vespæ (Dindorf's text). N.B. A selection composed as follows will be accepted as representing two authors—viz.: (*a*) Two plays of Æschylus, including the Agamemnon; (*b*) two plays of Sophocles; (*c*) two of the above-named plays of Aristophanes, or three of the above-named plays of Euripides. 7. Theocritus (Fritzche's text). 8. Pindar—Olympian and Pythian Odes (Dissen's text). 9. Plato—The Republic, books i.-v. (Baiter and Orelli's text). 10. Thucydides—books i., ii., iii., or ii., iii., iv. (Bekker's texts). *Latin*: 11. Virgil, three alternatives—(*a*) Eclogues and Georgics with Æneid i.-vi.; (*b*) Eclogues and Georgics with Æneid vii.-xii.; (*c*) The Æneid (Connington's text). 12. Cicero, three alternatives—(*a*) Philippics i.-vii., with part v. of Watson's Select Epistles; (*b*) Pro Murena, Pro Cluentio, with part i. of Watson's Select Epistles; (*c*) In Verrem, any two parts of the Actio Secunda, with part i. of Watson's Select Epistles. For the Orations, Baiter and Kayser's text is used. 13. Horace—the Odes, Carmen Sæculare, and Epodes; with either The Satires, or The Epistles book i., together with the Ars Poetica (Orelli's text). 14. Juvenal (omitting Satires ii., vi., ix.) (Mayor's text; 2nd edition), with either Persius (Conington's text) or one book of the Satires of Horace (Orelli's text). 15. Propertius—books i.-iii., or iv.-v. (Haupt's text), with the selections from Catullus published by the Clarendon Press, 16. Plautus, any four of the following plays—Amphitruo, Aulularia, Captivi, Menæchmi, Miles Gloriosus, Mostellaria, Rudens, Trinummus. (For the Mostellaria and Menæchmi, Ritschl's text; for the Aulularia, Wagner's; for the other plays, Fleckeisen's.) For two of the four any four plays of Terence (Wagner's text) may be substituted. 17. Lucretius—books i., ii., iii., and v. (Munro's text). 18. Tacitus—The Annals, books i.-iv. (Halm's text). 19. Livy—books ii.-v. (Madvig's text).

Rules with respect to the Selection of Books.—1. All candidates for Honours must offer the following authors: (1) Homer; (2) Desmosthenes; (3) Virgil; (4) Cicero. 2. The number of Greek and Latin authors offered must be as nearly as possible equal. 3. If two Greek dramatists are offered, one of the two must be either Æschylus or Sophocles. 4. If a candidate offers more than five books, one of them must be a Greek dramatist. 5. If a candidate offers Juvenal with one book of the Satires of Horace he cannot also offer the Satires as a portion of his selection from Horace.

4. *Order of the Examination.*—The examination is chiefly conducted in writing, but every candidate must be examined *viva voce* in the Gospels, and in one, at least, of the other books which he offers. Not

more than ten candidates can be examined *viva voce* on any one day. After all the candidates have been examined, the Moderators distribute the names of those whom they judge to have shown sufficient merit into three classes, with the names in each class arranged alphabetically. Each candidate who is so placed receives a certificate, signed by the Moderators, to that effect: if he has also satisfied them in the Four Gospels (or the substituted matter), that fact is stated in the certificate. If a candidate, though not of sufficient merit to be placed in the class-list, has yet shown as much knowledge of the several subjects as is required from those who do not seek Honours, the Moderators are empowered to give him a *Testamur*, which has the same effect as if he had satisfied the Moderators appointed to examine those who do not seek Honours. The class-list is affixed to the doors of the Schools, and is also published in the *University Gazette*.

First Public Examination for those who seek Honours in Mathematics.

1. *Time.*—This examination is held twice a year, and begins in Michaelmas term on December 18, and in Trinity term on the day after Commemoration.

2. *Candidates.*—Two preliminary conditions are necessary: (1) Candidates must have passed Responsions, or one of the examinations which are allowed in place of Responsions. (2) They must have given in their names to the Junior Proctor on the same days as those which are fixed for those who do not seek Honours. In so giving in their names they are required—(*a*) To exhibit the certificate of their Matriculation (unless they are members of an affiliated college); (*b*) to exhibit the *Testamur* of the Masters of the Schools, or one of the certificates which are accepted in lieu of such *Testamur*; (*c*) to pay a fee of £1.

3. *Subjects.*—The following is a list of the subjects: (1) Algebra with the Theory of Equations; (2) Trigonometry, Plane and Spherical; (3) Plane Geometry, including the Conic Sections, treated both geometrically and analytically; (4) Geometry of Three Dimensions, including the straight line, plane, and sphere, treated both geometrically and analytically, and the surfaces of the second order referred to their principal axes; (5) the Differential Calculus, including its applications to plane geometry, and to the determination of tangents and normals to surfaces and lines in space; (6) the Integration of Differential Expressions (including Differential Equations), with Geometrical applications; (7) the Elements of the Calculus of Finite Differences.

4. *Order of the Examination.*—The examination may be wholly con-

ducted in writing. At the close of it those candidates who are judged by the Moderators to have shown sufficient merit are arranged by them in three classes, the names in each class being placed in alphabetical order. This list is published in the same way as the list of those who have obtained Honours in Classics.

Second Public Examination.—Honour School of Literæ Humaniores.

Regulations of the Board of Studies.—The examination in the Honour School of Literæ Humaniores includes: (1) The Greek and Latin Languages; (2) the Histories of Ancient Greece and Rome; (3) Logic, and the Outlines of Moral and Political Philosophy. The examination consists of Stated and of Special subjects. Stated subjects are those in which papers or questions are always set; Special subjects are those which are offered by the candidates themselves.

I. *Stated Subjects.*—1. *Greek and Latin Languages*: All candidates are expected to translate the Greek and Latin books offered by them for examination, and to translate passages from other books not specially offered. Passages are also set for translation into Greek and Latin prose. 2. *The Histories of Ancient Greece and Rome*: All candidates are required to offer a period of Greek and a period of Roman History. The periods which may be offered are: In Greek History—(1) To the end of the Peloponnesian War; (2) from B.C. 500 to the death of Philip. With the first of these periods candidates are recommended to offer—Herodotus (Bähr's text, 2nd edition); Thucydides (Bekker's text); Xenophon's Hellenics, i., ii. (Dindorf's text). With the second—Herodotus, v.-ix.; Thucydides; Xenophon's Hellenics; Demosthenes—Olynthiacs, Philippics; De Falsa Legatione, and De Corona (Baiter's text). *In Roman History*—(1) From the beginning of the First Punic War to the Battle of Actium; (2) from the end of the Third Punic War to the accession of Vespasian. With the first of these periods candidates are recommended to offer—Polybius, i., ii., iii., vi. (Schweighaüser's text); Plutarch's Lives of the Gracchi (Sintenis's text); Cicero's Letters (Watson's selection); Sallust—Catiline and Jugurtha (Dietsch's text). With the second—Plutarch's Lives of the Gracchi; Cicero's Letters (Watson's selection); Sallust—Catiline and Jugurtha; Tacitus—Annals, i.-vi. (Halm's text). Candidates are expected to show such a knowledge of Classical Geography and Antiquities, and of the general History of Greece and Rome, as is necessary for the profitable study of the authors or periods which they offer. Questions are also set in the general results of the Science of Language, with especial reference to Greek and Latin. 3. *Philosophy*: Logic; the Outlines of Moral Philosophy; the Outlines of

Political Philosophy. Under the head of Logic, candidates are recommended to study the following subjects: The nature and origin of knowledge; the relation of language to thought; the history of Logic in Greece to the time of Aristotle inclusive; the theory of the Syllogism; Scientific Method, including a comparison of the methods of different sciences, and the principles of historical evidence. Questions will be set in Trendelenburg's Elementa Logices Aristotelese, and in Bacon's Novum Organum, book i. and book ii., Aphorisms 1-20. Under the head of Political Philosophy, candidates are recommended to study the following subjects: The origin and growth of Society; Political Institutions and forms of Government, with especial reference to the history of Greece and Rome; the sphere and duties of Government; the leading principles of Political Economy. The following *books* are prescribed for the examination: (1) Plato's Republic. (2) Plato's Protagoras, Phædrus, Gorgias, Laws iii., vii., x. (3) Aristotle's Nicomachean Ethics. (4) Aristotle's Politics. (5) Locke on the Human Understanding, with either (*a*) Butler's Sermons, or (*b*) Hume's Enquiry concerning the Principles of Morals. (6) The Transcendental Æsthetik and Analytik in Kant's Kritik der reinen Vernunft, and the Grundlegung zur Metaphysik der Sitten, with the two chapters of the Kritik der Praktischen Vernunft, entitled severally von den Grundsätzen and von den Triebfedern, der reinen Praktischen, Vernunft. (The authorised text of Plato is Baiter and Orelli's, of Aristotle Bekker's. The prescribed portions of Kant may be offered in an English translation as well as in the German. Candidates, if they offer a translation, are requested to state in their list of books which translation they offer.) Out of this list candidates are recommended to offer one book of Plato and another of Aristotle; those who offer more than these two books may either select from this list a third book, either ancient or modern, or offer one of the special subjects. But candidates who have offered Plato's Republic and Aristotle's Nicomachean Ethics may offer a part of the Politics without bringing up the whole. Candidates are expected to show such knowledge of the history of Philosophy, or of the history of the period of Philosophy to which the philosophical authors offered by them, either as stated or as special subjects, belong, as is necessary for the profitable study of these authors.

II. *Special Subjects.*—Candidates may offer as a Special Subject any one of the following: *Greek and Latin Languages*: (1) The Homeric Poems; including the literary history of the Poems, and a critical study of books i.-iii. or the Iliad, or of books ix.-xi. of the Odyssey. (2) The Lyric and Elegiac Poets of Greece (Bergk's Poetæ Lyrici

Græci); including a critical study of the Olympic Odes of Pindar, with the corresponding period of the history of Greek Literature (3) Aristophanes and the Fragments of the Old Comedy, with the history of the Greek Drama, and either (*a*) a critical study of the Clouds, Birds, or Frogs; or (*b*) a special study of the contemporary history of Athens, with Plutarch's Life of Pericles. (4) Plautus and Terence, and Ribbeck's Comic Fragments, including a critical study of a play of Plautus; with the history of Roman Literature before Lucretius. (5) Lucretius, and the history of Roman Literature from Lucretius to the death of Augustus. (6) The language and composition of the Nicomachean Ethics, with a critical study of the last five books. (7) The text and language of Thucydides, with a study of the MSS. and principal various readings. (8) A minute study of Comparative Philology as illustrating the Greek and Latin Languages. Candidates are recommended to use Bopp's Comparative Grammar (third edition). Those who are acquainted with Sanskrit will have an opportunity of showing their knowledge. *History of Greece*: (1) Greek Art, with Pausanias, i., v., vi., and with Pliny's Natural History xxxiv.-xxxvi. (2) The Geography of Peloponnesus, with Strabo, viii. (3) The Life of Alexander. (4) The Achæan League. (5) Egyptian History to the Persian Conquest, with Herodotus II. and Diodorus I. (The Fragments of Manetho should also be studied.) *History of Rome*: (1) The Constitutional History of Rome down to the beginning of the Second Punic War. (2) The Geography and Races of Ancient Italy. (Candidates who offer this subject will be expected to show an acquaintance with the remains of the early Italian languages). (3) The Commentaries of Gaius. (4) The Age of the Antonines. (5) The History of the Roman Empire from Diocletian to Julian. (6) Roman Architecture and the Topography of Rome. *Logic, and Moral and Political Philosophy*: (1) Aristotle, De Animâ. (2) The Philosophy of the Eleatics, Heracliteans, and Megarians, with the Theætetus and Sophist of Plato. (3) The Philosophy of the Stoics and Epicureans, with the Discourses of Epictetus and the tenth book of Diogenes Laertius. (4) The Philosophy of Hume and Berkeley, with Berkeley's Principles of Human Knowledge, Alciphron, and Theory of Vision, and with Hume's Enquiry concerning Human Understanding. (5) Political Economy, with one or more treatises to be selected by the candidate. Candidates are recommended not to offer more than one Special subject. It is not necessary for the attainment of the highest Honours that any special subject should be offered. Candidates intending to offer any subject not included in the preceding list must give notice of their intention six months

before the examination, and obtain the approval of the Board of Studies. Any such notice or any other enquiry respecting the above-mentioned books or subjects is to be addressed to the Chairman of the Board of Studies. The above-mentioned Special subjects may be varied from time to time by the Board of Studies, but any candidate who does not appear for examination in the first term in which he is of sufficient standing to do so, or whose name has not been placed in the list of Honours, is permitted to offer at any future examination the same Special subjects which he then offered or might have offered. The examiners have given notice (1883), that, in accordance with the recommendation of the Board of Studies, there will be, till further notice, only three papers of general questions, which will be entitled: (1) Logic; (2) Moral and Political Philosophy; (3) Ancient History. The questions on the books offered in Roman History will in future be combined into one paper, as has been already done with those on the books offered in Greek History. The other papers will be arranged as before, *i.e.*, there will be (1) papers upon the books offered by each candidate, (2) a paper of unprepared translations, (3) Translation into Greek Prose, (4) Translation into Latin Prose.

Second Public Examination.—Honour School of Mathematics.

Regulations of the Board of Studies.—The following is the syllabus of the subjects in which candidates are examined: *Pure Mathematics*: (1) Algebra; (2) Trigonometry, plane and spherical; (3) Geometry of two and three dimensions; (4) Differential Calculus; (5) Integral Calculus; (6) Calculus of Variations; (7) Calculus of Finite Differences; (8) Theory of Chances. *Mixed Mathematics*: (1) Mechanics of Solid and Fluid Bodies; (2) Optics, Geometrical and Physical; (3) Newton's Principia, sections i., ii., iii., and parts of ix. and xi.; (4) Astronomy, including the more elementary parts of the Lunar and Planetary Theories. The above subjects are distributed over twelve papers as follows: (1 and 2) Elementary Pure Mathematics; (3) Elementary Mechanics of Solid and Fluid Bodies: (4-7) Pure Mathematics; (8-10) Mechanics of Solid and Fluid Bodies; (11) Optics, Geometrical and Physical; (12) Newton's Principia, and Astronomy.

Second Public Examination.—Honour School of Natural Science.

I. *General Regulations*—1. The subjects of examination in the Honour School of Natural Science are Physics, Chemistry, and Biology. 2. The examination is divided into two parts: the one termed the Preliminary Honour examination; the other termed the Final Honour examination. 3. The Preliminary Honour examination

is compulsory upon all candidates in the School, and is restricted to the more elementary parts of (1) Mechanics and Physics; (2) Chemistry, together with a practical examination of a simple character in the latter subject at least. 4. A candidate is allowed to present himself for the Preliminary Honour examination, either on the occasion of his Final Honour examination, or at any previous examination in the Natural Science School subsequent to the time at which he passes his First Public examination; and he is allowed to present himself for the Preliminary examination in Mechanics and Physics at a different examination from that in which he presents himself for the Preliminary examination in Chemistry. 5. In the Final Honour examination, a candidate may offer himself for examination in one or more of the three general subjects of Physics, Chemistry and Biology. The Final Honour examination in each subject is partly practical. 6. The place assigned to a candidate in the list of classes depends upon the joint result, in the judgment of the examiners, of his examination in all the subjects in which he offers himself for examination on the occasion of his Final Honour examination, whether they be included in the Preliminary or Final divisions of the examination. 7. The Final Honour examination begins not later than seven days after the termination of the Preliminary Honour examination; and, during the interval between the two parts of the examination, a list of those who have passed the Preliminary examination is issued by the examiners, the subject or subjects in which each candidate has passed being stated. 8. In the Final Honour examination, a candidate may, in addition to his general subject or subjects, offer himself for examination in special subjects included under any of the three general subjects of Physics, Chemistry, and Biology. These special subjects must be selected by the candidate from a list issued by the Board of Studies.

II. *Regulations of the Board of Studies.* — *Preliminary Honour Examination.* — 1. *Mechanics and Physics*: Mechanics, to the extent represented by Newth's first book of Natural Philosophy, and the first four books of Ganot's Physics; Acoustics, Heat, Light, Magnetism, and Electricity, as represented by Ganot's Physics. 2. *Chemistry*: The general principles of Chemistry, and the properties of the better-known elements and compounds (excepting such as are included under Organic Chemistry), as treated of in any one of the following manuals: Williamson's Chemistry for Students, Roscoe's Lessons in Elementary Chemistry, Wilson's Inorganic Chemistry, Fownes' Manual of Chemistry, or more fully in Miller's Elements of Chemistry, vol. ii. The practical examination will comprise the

analysis of single substances, and such elementary exercises in chemical manipulation as are included in Harcourt and Madan's Exercises in Practical Chemistry, part i.

Final Honour Examination. — The Final Honour examination comprises three General subjects, viz.: i. Physics, ii. Chemistry, iii. Biology, and the following Special subjects, which may be taken in as supplementary to one or more of the General subjects: A. Crystallography and Mineralogy—the former as included under the General subjects of Physics and Chemistry, the latter as included under Chemistry. B. Geology and Palæontology—the former as included under the three General subjects, the latter as included under Biology. C. Zoology, D. Botany, as subjects included under Biology. The several sections which follow deal with the manner in which each separate subject, whether general or special, is to be studied by a candidate for Honours. The appended list of books are intended to serve as guides, suggestive of the best course of study, and offering some choice of text-books. Alternative treatises are in several cases included in the lists in the same paragraph. In many instances portions only of the works recommended will need to be studied as treating in a special manner of the subjects for which the book may be recommended. The Board desire it to be understood that a knowledge of the subjects, based on practical work, as well as knowledge gathered from books, will always be required at the examinations in this School.

I. *General Subjects*: I. *Physics*: A candidate who offers himself in the Final Honour examination for examination in Physics as his general subject shall be required to show an accurate general knowledge of Physics, and he shall be allowed to present himself in addition for a more detailed examination in one or more of the following branches of Physics: Acoustics; Heat; Light; Electricity and Magnetism. It is necessary that a student of Physics should have at least an elementary knowledge of Geometry, Algebra, and Mechanics. Jamin's Cours de Physique, last edition, in 3 vols., may be mentioned as a good text-book on General Physics. Students are, however, advised to consult their tutors or the Professor of Experimental Philosophy with respect to the books to be read, inasmuch as the most desirable course of study must depend on the Mathematical knowledge of each individual. II. *Chemistry*: Candidates in the Final Honour examination who offer themselves for examination in Chemistry will be expected to show an acquaintance with the following subjects: I. Chemical Physics; II. Inorganic Chemistry; III. Organic Chemistry; IV. General and Theoretical Chemistry.

There will also be a Practical examination, which will comprise—V. The Qualitative and Quantitative analysis of inorganic substances and the ultimate analysis of organic substances. VI. The preparation of chemical specimens. The use of books will be allowed to candidates in the examination in Quantitative Analysis. III. *Biology*: 1. Candidates who offer themselves in the Final Honour examination for examination in Biology will be expected to show an acquaintance, firstly, with General and Comparative Anatomy and Histology (under which terms vegetable structures are included); secondly, with Human and Comparative Physiology, inclusive of Physiological Chemistry; and, thirdly, with the General Philosophy of the subject. 2. In these subjects the candidates will be examined both by paper work and practically, and will be required to give evidence of being competent not merely to verify and describe specimens already prepared for naked-eye or microscopic demonstration as the case may be, but also to prepare such or similar specimens themselves. Such an amount of Botany will be required of candidates who make Animal Biology their principal subject as is contained in Huxley and Martin's Course of Practical Instruction in Elementary Biology, 1875, with the illustrative practical work contained therein. 3. All Biological candidates will be required, before entering upon any other part of the examination, to answer questions in two papers—one in Elementary Physiology and one in Elementary Morphology. The papers subsequent to the first two will each comprise questions in Physiology and Morphology; but a candidate will be allowed to answer either the Physiological or the Anatomical Questions alone, or both; and in like manner it will be open to any candidate to offer himself for examination in both divisions of the practical work or in one only. The practical work in Experimental Physiology, as distinct from its Histological and Chemical Departments, may comprise—(1) Such experiments and observations as can be performed upon the living human subject, and by consequence upon other living beings, in the condition of health. (2) Such experiments and observations as can be performed upon animals recently killed. Amongst these may be specified: the methods for demonstrating the fundamental properties of nerves and muscles when removed from the body; the fundamental properties of spinal centres as demonstrable upon decapitated animals; the physiology of living cells, such as blood corpuscles and ciliated cells; the action of the excised heart. (3) Demonstration of the construction and application of apparatus used in physiological research. (4) Such dissections of animals after death as may be necessary for the due demonstration of the various structures con-

cerned in any special branch of physiological experimentation. 4. Candidates may, in addition to the amount of work indicated in the preceding paragraphs, bring up any of the "Special Subjects" contained in the list appended below. A candidate who offers himself for examination in a Special subject will be expected to show, firstly, a detailed practical acquaintance with specimens illustrating that subject, for which purpose the catalogues in the University Museum can be made available; and, secondly, exact knowledge of some one or more monographs treating of it. Excellence, however, in a Special subject will not compensate for failure in any essential part of the general examination. Every candidate must state, at the time of entering his name for examination, what Special subject, if any, he takes in. A student who offers himself for examination in a Special subject is referred to the following provisional list: (*a*) Comparative Osteology; (*b*) the Comparative Anatomy and Physiology of the Organs of Digestion; (*c*) the Comparative Anatomy and Physiology of the Organs of Circulation and Respiration; (*d*) the Comparative Anatomy and Physiology of the Nervous System; (*e*) the Comparative Anatomy and Physiology of the Reproductive Systems; (*f*) Ethnology. Candidates who offer themselves for examination in Geology, Zoology, or Botany, will be required to exhibit practical acquaintance with those subjects to at least the same extent as candidates who offer themselves for examination in any one of the Special subjects above mentioned are required to do with reference to those subjects. But they will not be required to go through the same amount of practical work in the departments of Biology not specially connected with Geology, Zoology, or Botany, as candidates who do not bring up any one of these three subjects.

II. *List of Special Subjects*: A. *Mineralogy and Crystallography.* (*a*) Candidates for Honours in the Natural Science School who desire to take in Mineralogy as a Supplementary science should exhibit a practical as well as theoretical knowledge of Crystallography, and of Crystallographic Physics. (*b*) The candidate should also be acquainted with the Crystallographic characters of such substances as serve to illustrate the principles and applications of Crystallography. (*c*) Mineralogy may be further pursued by the student: (*d*) Firstly, as a discriminative and classificatory science, involving an acquaintance with the logical principles of classification. (*e*) Secondly, in respect to its subject-matter, namely, by the actual study of the more important minerals and other crystallised substances; more especially of such as illustrate the principles of Classification as well as of Crystallography, and of such as are important either from their con-

tributing to form the rock masses of the globe, or from a mining point of view, or as being of value for their employment in the useful arts. (*f*) Thirdly, in respect of the practical methods of discriminating minerals, not merely by investigating their Crystallographic forms with the aid of the goniometer, but by determining their physical characteristics, specific gravity, degree of hardness, colour, optical and pyro-electric properties, &c.; and also by examination with the blow-pipe and other simple chemical tests. (*g*) And finally, the mineralogical student should be acquainted with the hypotheses regarding the causes that have operated in effecting the deposition, the transformations, or the successions of minerals in veins and rocks. B. *Geology:* Candidates who propose to offer themselves for examination in Geology would do well to keep in mind that the aim of this branch of science is nothing less than to discover and demonstrate the ancient history of the earth. For this purpose it is required not only to obtain correct knowledge of the composition, structure, and arrangements of rocks, and the nature and distribution of organic remains, but further to apply to the phænomena which have been observed just reasonings founded on analogies in existing nature, and principles established by Physics, Chemistry, and Biology. Only in proportion as this can be truly accomplished can the foundations of Geological Theory be securely laid. The portions of Geological study which are now suggested to candidates in illustration of what has been said relate to the internal structure and movement of rock masses; their chemical composition and mineral aggregation; the organic remains which they enclose; and the inferences from observed phænomena as to the causes which operated to produce them. *Composition, Structure, and Arrangement of Rocks:* (*a*) Rocks generally: the grounds of their division into and classification as Rocks of Igneous or Aqueous origin; Rocks of stratified or unstratified arrangement; and as Rocks of Palæozoic, or Cainozoic age. (*b*) Stratified Rocks: their chemical and mineral constitution, source of materials, conditions of depositions in the sea, in lakes, or on the course of rivers. (*c*) Unstratified Rocks: considered as to their classification, composition, and structure, the conditions of their occurrence, and geological age. (*d*) Metamorphic Rocks: Rocks regarded as altered from their first condition by heat and chemical reactions below the surface of the earth. (*e*) Divisional Structures in Rocks, known as "joints," "cleavage," and "foliation:" how produced, and in what geological periods. (*f*) Mineral Veins: metallic and mineral contents; occurrence in relation to the nature, position, and antiquity of Rocks, movements of disturbance in the crust of the earth, and geological time. *Movements in the Crust of the*

Globe—Heat of the Interior: (*g*) Earthquakes and ancient subterranean movements: characteristic phænomena and probable causes. (*h*) Volcanos: their characteristic physical and chemical phænomena, geographical distribution, and geological age. *Physical Geography—Climate*: (*i*) The leading features of Physical Geography: by what natural processes, with what measures of force, and during what periods of time, the characteristic phænomena have been occasioned. (*k*) The Temperature of the earth at attainable depths, in relation to ancient and modern climate. *Palæontology*: (*l*) The Flora and Fauna of the Land in a limited geological period, as for example the period of the Stonesfield Oolite. (*m*) The Fauna of the Sea in a limited geological period, as for example the Cambro-Silurian period. (*n*) Or the Lower Cretaceous period. (*o*) The Carboniferous Flora of Britain; origin of the coal, and of the accompanying strata; dislocations; dykes; quantity of coal; depth of working; rate of consumption; probable duration. (*p*) Monographs of Groups of Organic Remains, specially such as belong to families of plants and animals which are characteristic of geological periods, or have become comparatively rare in existing nature; for example—The Zamiaceæ, Lepidodendra, Sigillariæ, among Plants; the Crinoïdea, Trilobitida, Brachiopoda, Cephalopoda, among Invertebrate Animals; Megalosaurus, Plesiosaurus, Teleosaurus, Rhamphorhynchus, among reptiles; Ungulata and Marsupialia, among Mammalia. C. *Zoology*: Candidates offering Zoology will be required to show a thorough acquaintance with the following subjects: 1. The general principles of classification, applied to the animal kingdom, together with a comparison of the more important systems hitherto proposed for this purpose. 2. The structure and habits of animals, with especial reference to their external organs. 3. The types of extinct animals, in order to show their position and relationship with existing groups. And for more special subjects — *a*. The classification, geographical distribution, affinities, economy, transformations, and development of the animals comprised in some one or more of the families, genera, or individual species of animals; with practical illustrations, by dissection and delineation, of their structure. *b*. The minute details of structure of special individual organs may also be practically shown and illustrated by dissection; e.g.—The organs of flight throughout the Insecta; the mouth organs in the Crustacea; the embryonic and metamorphic changes occurring in one or more of the species of any family, especially amongst the Invertebrata. *c*. The student may also offer himself for examination upon the Fauna of any district in the British Islands; e.g.—The animals of the Isis and Chirwell; the indigenous

invertebrated Fauna of the neighbourhood of Oxford. The literature of Zoology is so extensive, and the number of special monographs on nearly every branch of the subject is so great, that it will in all cases be advisable for the student to apply to his tutor or to the Professor of Zoology for references to the best works and memoirs necessary for working out the particular subject which he may desire to study. D. *Botany*: Candidates offering Botany will be required to show a thorough acquaintance with the following subjects: 1. Structural and Physiological Botany, together with dissections and descriptions of preparations, illustrating the minute structure and organs of plants. 2. The Principles of Systematic Botany, with a knowledge of the leading characters of the more important Natural Orders. 3. Of Geographical and Geological Botany, so much as is contained, for example, in Henfrey's "Elementary Course" (2nd ed.), or in Balfour's "Manual of Botany." 4. The technical description of specimens of plants.

Second Public Examination.—Honour School of Jurisprudence.

1. *General Regulations.*—1. The examination in the School of Jurisprudence includes: (1) General Jurisprudence; (2) The History of English Law; (3) Such departments of Roman Law, and (if the Board of Studies shall think fit) such departments of English Law, as may be specified from time to time by the Board; (4) International Law, or some department of it specified by the Board of Studies. This may be omitted by candidates who do not aim at a place in the First or Second Class. 2. Subject to such regulations as the Board may make from time to time, select portions of Historical study, approved by the Board of Historical Studies, may be substituted by candidates for portions of Legal study; provided that no candidate shall be allowed to offer in the School of Jurisprudence any select portion, whether of Legal or Historical study, which he has already offered in the School of Modern History.

2. *Regulations of the Board of Studies.*—The following subjects of examination are specified by the Board, but candidates are informed that with the exception of the Institutes of Gaius, the Institutes of Justinian, and the specified Acts of Parliament, none of the matter of the examination is required to be studied textually. The other authorities mentioned in the notice are intended to define, to some extent, the nature of the several topics of the examination, and to indicate the sources from which information upon each can be most conveniently obtained: 1. *General Jurisprudence*: Candidates will be examined in the principles of Jurisprudence, in the theory of Legisla-

tion, and in the early history of Legal Institutions; with special reference to Austin's Lectures, Bentham's Principles of Morals and Legislation, and his Theory of Legislation, by Dumont, and the works of Sir Henry Maine. They may also refer to Hobbes' Leviathan, books i. and ii., and to Savigny's System des heutigen römischen Rechts, vol. i. 2. *History of English Law*: (*a*) History of Constitutional Law. Candidates will be expected to have mastered the leading principles of existing Constitutional Law, and in particular to show a knowledge of the following topics: The legislative power of Parliament, the modes in which it is exercised, and its extent as to Territory and Persons; the Prerogatives of the Crown, the Privileges of the Houses of Parliament; the constitutional position of—the Privy Council, the Ministers of the Crown, the Established Church, the Courts of Law, and the Armed Forces. They must possess such an acquaintance with the history of the above as is necessary to explain their present character and working. They are recommended to refer to the Constitutional portions of Blackstone's or Stephen's Commentaries, Dr. Stubbs' Documents Illustrative of English History, and his Constitutional History (omitting those chapters which relate more especially to Political History), Hallam's Constitutional History, Sir T. E. May's Constitutional History, and Bagehot's English Constitution: and are required to read carefully the following Statutes—Constitutions of Clarendon; Magna Carta; Statute of Westminster II., 13 Ed. I., Stat. 1, c. 24.; Petition of Right; Habeas Corpus Act, 31 Car. II., c. 2; Bill of Rights, 1 W. and M. sess. 2.; Act of Settlement, 12 and 13 Will. III., c. 2. (*b*) History of the Law of Real Property. This subject is to be studied in Blackstone's Commentaries, book ii., or Stephen's Commentaries, vol. i., book ii., part i., and Mr. Digby's Introduction to the History of the Law of Real Property. The principal statutes referred to in the latter book should be mastered, and reference may with advantage be made to Mr. Williams' Treatise on the Law of Real Property. 3. *Roman Law*: The Institutes of Gaius; the Institutes of the Emperor Justinian. Candidates are expected to be acquainted with the history of Roman Legislation and Roman Judicial Institutions. 4. *English Law*: The Principles of the Law of Contracts. 5. *International Law*: (*a*) The outlines of International Law as a system. (*b*) The history of the law relating to seas, ships, and navigable rivers in time of peace. Students are recommended to read Woolsey's Introduction and Heffter's Europäisches Völkerrecht (in German or French), referring also to Wheaton's Elements, or to the Law of Nations by Sir Travers Twiss. Upon subject (*b*) they may consult Ortolan, Diplomatie de la Mer, livre deuxième.

Second Public Examination.—Honour School of Modern History.

1. *General Regulations.*—1. The examination in the School of Modern History includes—(1) The continuous History of England. (2) General History during some period, selected by the candidate from periods named from time to time by the Board of Studies. (3) Those who aim at a place in the First or Second Class are also required to offer a special portion of History or a special Historical subject, carefully studied with reference to original authorities, or a select portion of Law, approved by the Board of Legal Studies. (But no candidate can offer any portion of either Legal or Historical study which he has already offered in the School of Jurisprudence.) 2. Every candidate is required to have a knowledge of Political Economy, of Constitutional Law, and of Political and Descriptive Geography. (3) A subject or period of Literature may also be added as an optional subject. 4. Candidates proposing to offer any special portion of History, or any special Historical subject, or any subject or period of Literature not included in the list suggested by the Board of Studies, must submit it to the approval of the Board, six months before the examination.

2. *Regulations of the Board of Studies.*—1. Candidates who intend to present themselves for examination are, until further notice, desired to offer—I. The History of England to the Accession of Queen Victoria. II. One of the following periods of general History, to be studied in the best modern writers: (1) A.D. 476-1272; (2) A.D. 1000-1519; (3) A.D. 1328-1648; (4) A.D. 1643-1815. III. (In the case of those candidates who aim at a place in the First or Second Class) a special portion of History or Historical subjects, carefully studied with reference to original authorities. A. The following subjects or portions of History are suggested by the Board for the option of candidates: (1) The Age of Charles the Great and his Dynasty; (2) the Reign of Henry II. of England; (3) the Age of Lewis XI. and Charles VIII.; (4) the Great Rebellion (down to the Restoration); (5) the Establishment of the English Power in India (A.D. 1784-1806); (6) the French Revolution (down to the First Consulate). B. Candidates proposing to offer any other Historical subject or portion of History must give notice six months before the examination, and obtain the approval of the Board of Studies. Every application by a candidate proposing to offer a special subject or period not included in the list suggested by the Board of Studies must be accompanied by a statement of the books, documents, and other authorities

which the candidate proposes to use. C. The following portions of Legal study (to be studied as directed by the Board of Studies for the School of Jurisprudence) may be substituted by candidates for the special portion of History or Historical subject required to be offered: (1) The History of the Law of Real Property; (2) the Outlines of International Law as a system. D. In the case of a candidate offering a special subject or portion of History, other than the above suggested subjects or portions numbered 4 and 5, such special subject or portion must fall within the period of General History offered by him. 2. With respect to the above three heads of examination, the Board of Studies, for the assistance of students, and for the purpose of indicating the general extent and character of the course of study which the examination in this school will require, publishes recommendations for special courses of reading. The names of the books may be obtained on application. 3. Candidates on entering their names for the examination in this School will be required to state—(1) the period of General History; (2) the special portion of History or Special Historical subject which they offer, and, with respect to such special portion or subject only, the books and authorities which they have used for the study of it. 4. A subject or period of Literature may, at the option of candidates, be offered in addition to the above-mentioned subjects of examination. Under this head candidates may offer any one of the following: (1) The Elizabethan Period of Literature, the Historical Plays of Shakespeare to be studied minutely; (2) the Age of Lewis XIV., the plays of Molière to be studied minutely; (3) the Age of Dante, the Purgatorio to be studied minutely. Candidates desiring to offer any other period or subject of a like character must obtain the leave of the Board six months before the examination. 5. All candidates will be required to have a knowledge of Political Economy, of Constitutional Law, and of Political and Descriptive Geography. The subject of Political Economy may be read in Adam Smith's Wealth of Nations, or in Mill's Principles of Political Economy; and candidates will be expected to trace the working of economic principles in the history they offer.

Second Public Examination.—Honour School of Theology.

1. *General Regulations.*—1. The subjects of examination in the Honour School of Theology are: (1) The Holy Scriptures; (2) Dogmatic and Symbolic Theology; (3) Ecclesiastical History and the Fathers; (4) the Evidences of Religion; (5) Liturgies; (6) Sacred Criticism, and the Archæology of the Old and New Testaments. Of

these subjects, (1) the Holy Scriptures, within the limits assigned by the Board of Studies, is obligatory on all candidates. Those who aim at a First Class are also required to offer subject (2) Dogmatic Theology, and at least two of the other subjects. Those who do not aim at a First Class are required to offer subject (2), or (3), or (4), or (5), or the Hebrew language. 2. The Books of the New Testament must be studied in the Greek text. The History of the Church and of the Liturgies must likewise be studied with reference to original authorities. Elementary knowledge of the Hebrew language has some weight, advanced knowledge has a great weight, in the distribution of Honours. Candidates are permitted to offer portions of the Septuagint Version, including the Apocryphal Books of the Old Testament. 3. No candidate can be examined in this School who has not exhibited to the examiners a certificate of having passed in the Rudiments of Faith and Religion—*i.e.*, in the Books of the Old and New Testaments (the Gospels and the Acts of Apostles being studied in the original Greek), with (1) *either* the Thirty-nine Articles, *or* (2) a special Book of the Old or New Testament or a period of Ecclesiastical History. A list of works exhibiting in full the usual requirements of the Board of Studies may be had on application.

New Scholarship.

Chinese Scholarship.—This is awarded every alternate year, after an examination in the Chinese language and literature, and is of the value of £50 per annum for two years, subject to the condition that the scholar shall reside not less than seven weeks in each term, and that he shall pursue his studies in Chinese under the advice and supervision of the Professor of Chinese. The electors have power, in case no candidate satisfies them in the examination for the cholarship, to grant the annual stipend of £50, or any less sum, under the name of an exhibition, to any person who shall be certified to them as desirous of pursuing the study of Chinese.

General Information.

Some information on various academical institutions and customs, and the mode of life at the University, will be of service to the student.

College Tutors and Lecturers.—Side by side with the extension of the public teaching of the University there has been an extension of the teaching of colleges and halls. Some years ago this teaching was chiefly confined to catechetical morning lectures, supplemented by weekly written exercises; and there was an attempt on the part of each college or hall to provide within its own walls all the instruction

that its members required. Within recent years, however, this system has been largely modified. On the one hand, there has grown up a much greater freedom of intercourse between tutors and students. Teaching is neither so limited nor so formal as it used to be. The special needs of individual students are regarded, and a student of ability commonly receives from his tutor all the private help which it is possible for him to give. On the other hand, the principle of division of labour has been applied to a much greater extent than formerly. Several groups of colleges have combined together for purposes of instruction in such a way that each lecturer, instead of having to lecture upon a number of heterogeneous subjects, is able to appropriate to himself some one or more special branches. The advantage of this system to the student is partly that a much wider range of subjects can be covered, and partly that he is able to gather the best thoughts of several minds.

The ordinary lectures of colleges and halls are of course chiefly intended for their members: the subjects of lecture are not published, but are announced by a written notice on the buttery-board: the fees, which are included in the terminal "battels," vary from £15 to £25 per annum, irrespective of the number of lectures which an undergraduate attends. This charge for tuition sometimes ceases after the twelfth term of residence, and sometimes continues to be paid until all the examinations which are necessary for the degree of B.A. have been passed.

Private Tuition.—Before the recent extension of professorial and college teaching most candidates for university Honours were practically compelled to avail themselves of private help. This help was given, partly by college tutors during the hours which were not employed in college lectures, partly by other resident graduates. Many of the most distinguished members of the University were thus employed, and much of the best teaching was only thus to be obtained. But although there are still some cases in which a candidate for Honours may find it advisable to supplement in this way the help which he can derive from public sources, private tuition is no longer practically indispensable to the attainment of high distinction.

For students of another class private tuition prevails to an even greater extent than formerly. Nearly all the instruction which is given by college tutors to candidates for ordinary degrees is necessarily adapted to the average requirements of such candidates; and consequently those students who, from defective preliminary training or other causes, fall below the average standard of attainment, usually

require more full and individual help than college tutors afford. This help is more necessary on first entrance than afterwards; and it is often a mistaken economy not to seek it.

For whatever purpose a private tutor be required, it is very desirable that a student should seek the advice of his college tutor or of the Censor of Unattached Students, before selecting one. Among private tutors are many graduates of high attainments and wide experience, but it should be remembered that the attainment of academical distinction is not always an indication of the power of communicating knowledge, and also that where a subject of study has many branches it is not always easy for a student to find out without guidance the particular branch in which a particular tutor excels.

The fee of a private tutor has been for a long time fixed by custom at £20 for an hour's lecture on six days in the week for eight weeks, or £10 for an hour's lecture on three days in the week. Some private tutors receive their pupils in small classes, the fee for which varies with both the particular tutor and the particular subject of study.

The Bodleian Library. — The Bodleian Library consists partly of the original collection of the founder, partly of collections which have been from time to time bequeathed to the University, partly of copies of every copyright work published in England, and partly of purchased books and MSS. It contains at present between 350,000 and 450,000 volumes.

The Taylor Institution.—The Taylor Institution was established for the promotion of the study of Modern European Languages. This object is effected by the following means: (1) Instruction is given to all members of the University who choose to avail themselves of it, in the French, German, Spanish, and Italian Languages. A fee of £1 is charged for attendance on the first two courses of lectures in each of these languages: the subsequent courses of lectures in any language, after two fees have been paid to the lecturer in that language, are free. (2) Lectures on subjects connected with foreign literature are given from time to time. (3) A scholarship and an exhibition are annually awarded for proficiency in some one or more of the languages taught in the Institution. (4) A library which contains a large collection of foreign literature is accessible to members of the University and, under certain restrictions, to other persons. The Taylorian Library consists of (1) the large reading-room, (2) a reading-room for Masters of Arts, (3) a reading-room for undergraduates, which is supplied with many standard works of reference on the leading subjects of University study, as far as they

come within the scope of the institution: the undergraduates' room is also provided with lockers in which a student who wishes to continue his reading of the same books on consecutive days may lock them up together with his own papers and note-books.

College Fellowships.—The following information must be taken to apply only to the system at present existing. Extensive alterations are under consideration by the University Commissioners.

College fellowships are eleemosynary institutions which constitute their holders members for the time being of an intra-academical corporation, with a voice in its government and a claim upon its revenues. They were established for the promotion of religion and learning, and the original intention has been so far respected by subsequent usage that literary or scientific merit is still the basis of election; but a fellow once elected is at liberty to follow his own pursuits, whether they be literary or otherwise. The conditions of eligibility and tenure vary considerably in different colleges. As a general rule, a candidate must be unmarried, he must have passed all the examinations required for the degree of B.A., and he must not be possessed of more than a certain amount of property: but to each of these conditions there are important exceptions. The election in all cases (excepting that of one fellowship at Exeter and another at Lincoln) is by coöptation, and is generally preceded by a competitive examination. Some colleges have a limited power of dispensing with this examination in the case of persons who are in the judgment of the electors singularly qualified to serve the college in the capacity of tutor or bursar; and most colleges have the right to elect without examination, and without any restriction as to marriage, one or more University professors. The subjects of examination for a fellowship are those which are recognised in the Schools of the University, and it is usually intimated, at the time of the declaration of a vacancy, in which class of subjects the examination will be held. Until recently a fellowship was always vacated by marriage, by the acceptance of ecclesiastical preferment of a certain annual value, and by the non-fulfilment of certain conditions as to academical degrees or Holy Orders; but several colleges have recently acquired the power to retain in his fellowship, or to re-elect, a Fellow who has proved himself useful to the college in the office of tutor or bursar; and in two colleges all ordinary fellowships are terminable at the end of seven or eight years. Although the salary of a tutor or lecturer is to be regarded as wages for work done, and is therefore distinct from the income of a fellowship, it must be borne in mind that a Fellow who resides in Oxford has almost always the opportunity of adding to his

income in this way. The usual income of a fellowship and tutorship combined may be estimated at from £500 to £900 per annum. Other collateral advantages may also be taken into account. The chief of them are that a Fellow, unless he be married, has the right to rooms within the college, the use of the establishment and the library, and also, if he be in Holy Orders, a prescriptive claim to succession in his turn to a college living.

College Scholarships, Exhibitions, and Clerkships.—These, like College Fellowships, are threatened with considerable modifications from their present footing. Scholarships are institutions which constitute their holders members of an intra-academical corporation, without a voice in its government, but with a claim to instruction, to rooms, and to an allowance for maintenance. They were in most cases originally intended to provide for the education at the University of the inhabitants of certain localities, or the descendants of certain families; their length of tenure was unlimited; and they gave, as vacancies occurred, a right of succession to fellowships. But in all these respects subsequent legislation has effected considerable changes: they are now for the most part open to a competitive examination, which has no other limit than that of age or academical standing; their tenure is usually limited to five years; they confer no right of succession to fellowships; and the various allowances of the older Statutes are commuted for a fixed money payment. Election in all cases takes place after an examination, of which due notice is given in the *Oxford University Gazette*, and also in the principal London newspapers; about two-thirds of the total number are awarded for excellence in Classics, the remainder are divided between other branches of University study. The examination papers are not published, but copies of them can sometimes be procured from one of the officers of a College; and candidates who have not been at one of the larger public schools, where the standard required is usually well known, will do well to endeavour to ascertain the nature of what is required of them before entering into the competition.

Exhibitions differ from scholarships partly in that they do not constitute their holders members of the corporation of a college, partly in that the limit of age is often extended, and partly in that they are frequently confined to persons who produce evidence of their need of assistance. Until the passing of the Universities Act of 1854 they were for the most part conferred at the absolute discretion of the Head or Head and Fellows of a College; but they are now more commonly given after an examination of the same kind as that which is held for scholarships.

Bible-Clerkships are offices to which certain small duties, such as those of marking the attendance of undergraduates in Chapel and of saying grace at dinner, are usually attached. They are in the free gift of the Head of a College or Hall, but it is not infrequent for him to open them to a competition among persons who produce evidence of want of pecuniary assistance.

Academical Expenses.—The cost of living at Oxford varies so largely with the means, tastes, and moral courage of a student that it is not possible to lay down many general propositions respecting it. The total amount is made up in each case of several elements: there are certain fixed expenses which are common to all alike, such as university and college fees; there are other expenses, such as those of board and lodgings, which, though varying with particular cases, vary only, as far as the colleges and halls are concerned, within definite limits; there are others, such as subscriptions to clubs or societies, which are common but voluntary: there are others, such as tradesmen's bills, which are not special to university life, and which are almost wholly within a student's power to fix for himself.

Some colleges and halls have of late revised their scale of charges, and made new arrangements with a view to the reduction of necessary expenses. For example, the deposit of a sum of money on admission, which was formerly required from all students as a guarantee against possible loss, is no longer required at certain colleges and halls from those who pay their battels in advance: the difficulties which arose to many students of slender means from being compelled to purchase the furniture of their rooms on commencing residence are obviated in several colleges and halls by allowing the hire of furniture from the college: the miscellaneous charges have been in several instances gathered together into a fixed annual payment: and at Keble College, St. Mary Hall, St. Alban Hall, and St. Edmund Hall, the payment of a fixed annual sum is now made to cover, with some trifling exceptions, all necessary academical expenses.

Tuition Fees.—Note: Where colleges or individual lecturers have combined for the purpose of lectures, the fees mentioned below include the right of admission to the other lectures of the combination. At *University*, £25 annually, which continues to be paid during each term of residence up to that of passing the last examination in the Final Schools. At *Balliol*, £25 annually, which continues to be paid by both classes of residents during each term of residence up to that in which they pass their last examination in any school, inclusive. At *Merton*, £7 7s. per term during residence until the degree of B.A.

is taken, and by B.A. Postmasters so long as they require tuition. At *Exeter*, £22 1s. annually by every resident undergraduate who has not passed all the examinations necessary for the degree of B.A.; certain remissions are made in the case of those who are reading for Honours in Chemistry. At *Oriel*, £21 annually during residence until the last examination has been passed. At *Queen's*, £24 annually for three years; £1 1s. per term afterwards to those who are still attending college lectures. The tutors allow £5 per term out of his tuition fees to a student who has passed Moderations and is reading to the satisfaction of his tutor in Natural Science. At *Lincoln*, £21 annually for three years. At *New College*, £21 annually until the last examination has been passed. At *Magdalen*, £21 annually until the last examination has been passed. At *Brasenose*, £22 1s. annually for three years, after which no further payment is required. At *Corpus*, £27 annually for three years. At *Christ Church*, £22 1s. annually until the end of the ninth term of residence (counting three terms in a year), after which an undergraduate pays no more tuition fees to the House. At *Trinity*, £22 1s. annually during residence, until the last examination for the B.A. degree has been passed. At *St. John's*, £21 annually for three years; and £3 per term afterwards during residence, as long as tuition is given. At *Jesus*, £18 18s. annually for three years: afterwards £9 9s. annually until all examinations for the degree of B.A. have been passed. At *Wadham*, £22 10s. annually till all examinations necessary for the B.A. degree have been passed, and, afterwards, as long as tuition is given. At *Pembroke*, £23 annually until the last examination for the degree of B.A. has been passed. Provision is made by the college to enable undergraduates to attend the lectures of professors or others in any recognised branches of university study in which it may not itself supply instruction. At *Worcester*, £21 annually for the first two years; £15 annually for the third and fourth years; and £9 for every subsequent year of residence. The fees for instruction in Natural Science are paid by the tutors up to the amount of the tuition fees. Fellow-Commoners pay £40 annually for three years. At *Keble*, the tuition fee is included in the gross annual sum. At *Hertford*, £20 per annum during residence until all the examinations necessary for the B.A. degree have been passed. In the case of those candidates for honours who offer special subjects in which there are no lectures in college, arrangements are made on the recommendation of the Educational Committee of the College to procure from without such assistance as may in their opinion be necessary. At *St. Mary Hall*, £20 annually for three years at least, and for such further time as an undergraduate avails himself of the

tuition which is afforded by the Hall. This sum is included in the gross sum paid by commoners under the Frugal system. At *St. Alban Hall*, the tuition fee is included in a gross sum. At *St. Edmund Hall*, on the Prepayment system, the tuition fee is included in the sum paid in advance each term. For other students the tuition fee is £5 5s. per term for three years; £2 2s. per term afterwards, if tuition is required. At *Charsley's Hall* there is no fixed tuition fee: members are at liberty to elect their own tutors.

Selected Candidates for the Civil Service of India.

The University of Oxford being one of the Universities approved by the Secretary of State for India at which Selected Candidates for the Civil Service of India may pass the prescribed two years of probation, arrangements have been made by the University for the instruction, and by most colleges for the reception, of such Selected Candidates.

1. *Admission of Selected Candidates.*—A Selected Candidate is eligible for immediate admission at almost all colleges and halls, or as an unattached student of the University. He is in all cases required to matriculate as a member of the University, but he is not required to pass an entrance examination. Inasmuch, however, as the number of rooms in a college or hall is almost always smaller than the number of its undergraduates, it is not always possible for such candidates to be admitted to residence within the college walls: in this case they can reside in licensed lodgings selected by themselves. The arrangements of the several colleges and halls vary so widely that it is advisable for a Selected Candidate, as soon as he has fixed upon the particular college or hall at which he would prefer to enter, to write to the Head of that college or hall, and ascertain from him the precise conditions under which he would be admitted.

2. *Instruction of Selected Candidates.*—Instruction is provided by the University in each of the six subjects prescribed in the Regulations of the Civil Service Commissioners. (1) In Law, the Reader in Indian Law lectures three days a week upon all the prescribed subjects. The Regius Professor of Civil Law usually gives two, or three, courses a year upon Roman Law. The Reader in Roman Law will also in future lecture in that subject. A fee of £1 is payable to the Reader in Indian Law for each course of lectures. (2) In the Classical Languages of India the Professor of Sanskrit gives instruction four or five times a week during each term both in the elements and in the higher philology of the language; the Lord Almoner's Professor of Arabic and the Laudian Professor of Arabic give what-

ever instruction may be necessary in that language during each term, and the teacher of Persian lectures during thirty-two weeks in the year. The statutable fees are £1 per term to the Laudian Professor of Arabic, and £5 for every period of eight weeks to the teacher of Persian for daily instruction, £3 for instruction every other day. (3) In the Vernacular Languages of India the teacher of Hindustani and the Teacher of Telugu give instruction three times a week during thirty-two weeks in the year in Hindustani, and in Telugu and Tamil, respectively; the fees are the same as those mentioned above in the case of the teacher of Persian. (4) In the History and Geography of India the Reader in Indian History lectures twice a week during term, and also receives exercises from persons who attend his lectures. A fee of £1 is payable for each course of lectures. (5) In Political Economy the Professor of Political Economy lectures usually three times a week during term. These lectures are open without fee. (6) In Natural Science, the Professor of Botany, Geology, and Zoology, respectively, give not only lectures but practical instruction, and the Botanic Garden and the Geological and Zoological departments of the Museum are open for study during the greater part of the year. A fee, which varies from £1 1s. to £3 3s., is usually charged for instruction in Botany; instruction in the other subjects is free. In addition to the University teaching, every Selected Candidate who enters a college or hall is admitted to the lectures of the college or hall, so far as they bear upon his course of reading. There is no special instruction provided by the colleges for such candidates, except that at Balliol lecturers have been appointed to supplement the University teaching in Political Economy and some oriental languages.

3. *Examinations for the Degree of B.A.*—A Selected Candidate is not required to pass Responsions; but he must pass the First Public examination in the ordinary way. In the Pass School of the Second Public examination certain changes have recently been made, the operation of which, though not confined to Selected Candidates, is of special benefit to them. A candidate in that School may now offer Sanskrit, or Persian, or both, in lieu of either Greek and Latin or a modern European language; he may also offer a period of Indian History and a branch of Indian Law. That is to say, he can obtain his degree by offering three of the same subjects which he is required to offer to the Civil Service Commissioners.

4. *Examinations for the Degree of B.C.L.*—Certain branches of Indian Law are now included as principal subjects in this examination.

Oxford Local Examinations.

Examination of Senior Candidates.

Candidates for this examination, who may be of either sex, must not have exceeded their eighteenth year on the 30th of April preceding the examination: but for persons who offer themselves for examination with a view to satisfying the preliminary requirements of the University for the Degree of Bachelor of Music, there is no prescribed limit of age. The examination consists of three parts: I. Examination in preliminary subjects, *i.e.* (1) a grammatical paper on some portion of an English author, (2) a short English composition, (3) Arithmetic. This is obligatory on all candidates. II. Examination in the Rudiments of Faith and Religion, *i.e.*, in certain portions of the Bible and of the Book of Common Prayer. This is obligatory on all persons unless their parents or guardians object to it on conscientious grounds. III. Examination in optional subjects: each candidate must pass in *one* of the sections marked B, C, D, and if he has declined the examination in the Rudiments of Faith and Religion he must pass in *two* of the sections marked A, B, C, D. The subjects are: A. English. B. Languages, *i.e.*, either Latin or Greek, or French or German. C. Mathematics, *i.e.*, Pure Mathematics to Algebraical Geometry inclusive, Mechanics, and Hydrostatics. D. Physics, *i.e.*, one of the four following groups of subjects: (1) Electricity, Magnetism, Light, and Heat; (2) Chemistry; (3) Vegetable and Animal Physiology; (4) Geology and Mineralogy. Candidates may also offer E, Drawing, and F, Music. The names of the successful candidates are published in two separate lists: (1) a list arranged in two divisions for each of the sections A, B, C, D, E, F; (2) a general list, arranged in three divisions. Successful candidates also receive a certificate, signed by the Vice-Chancellor, and conferring on them the title of Associate in Arts. Those candidates who show sufficient merit in translations from Latin and Greek authors, in Grammar, in Latin Prose Composition, and in Mathematics, to be excused from Responsions, may receive a certificate from the Delegates to that effect.

Examination of Women over Eighteen Years of Age.

This consists of two parts: I. The First examination. Every candidate is required to satisfy the Delegates in (1) English Composition; (2) any two of the following languages—(*a*) Latin, (*b*) Greek, (*c*) French *or* Italian, (*d*) German; (3) Arithmetic; (4) Euclid, i., ii., *or* Algebra to Simple Equations inclusive. Candidates are expected to

answer questions on the grammar of the languages selected, and to translate a piece of easy English into Latin, French or Italian, and German, as the case may be. II. The Second examination, which consists of two parts: (1) the Pass examination, (2) the examination for Honours. The *Pass examination* is divided into six sections, viz.: A. Languages, *i.e.*, the same languages as are required in the Preliminary examination, more advanced knowledge being required. B. Ancient History, *i.e.*, Greek History from B.C. 510 to the death of Alexander, and Roman History from the beginning of the First Punic War to the accession of Nerva, together with a special period more thoroughly studied. C. Modern History, *i.e.*, English History from the accession of Henry II. to the Revolution of 1688, together with a special period of either European or English History more accurately studied. D. Mathematics, *i.e.*, (*a*) Algebra, (*b*) Euclid i.-iv., or equivalent, (*c*) Elements of Mechanics. E. Physical Science, *i.e.*, (1) as necessary subjects—(*a*) The Elements of Physics, *i.e.*, Mechanics, with either Heat, Light and Sound, or Magnetism and Electricity, and (*b*) the Elements of Chemistry; (2) as optional subjects—(*a*) The Elements of Biology, (*b*) the Elements of Geology. F. Logic and Political Economy, *i.e.*, the greater part of either Whately or Jevons' Logic, and Adam Smith, books i., ii. In order to obtain the certificate of having passed this examination, it is necessaay to pass, at the same time, in Section A and in one at least of the other sections. No candidate can be examined in more than three sections at any one examination.

The *examination for Honours* is divided into eight sections, viz. (1) English; (2) Latin and Greek; (3) German, French, Italian, and Spanish (candidates are required to offer German and one at least of the other three languages); (4) Mathematics, Pure and Mixed; (5) Ancient History, with Latin and Greek Texts; (6) Modern History, with original Texts; (7) Mental and Moral Philosophy; (8) Physical Science, *i.e.*, one or more of the following subjects—(*a*) Physics, (*b*) Chemistry, (*c*) Biology, (*d*) Geology. No candidate can offer at the same examination more than one of these eight sections. Those who satisfy the examiners are divided into three classes in each section, according to their merits, the highest class being assigned only to those who pass with great distinction.

There is also a separate and optional *examination in the Rudiments of Faith and Religion*, which is divided into two parts: (1) Holy Scripture, with or without a knowledge of the Greek Text of the selected books of the New Testament; (2) the Book of Common Prayer. Candidates for a certificate must satisfy the examiners in

the first of these parts, but are not necessarily required to offer the second.

Association for Promoting the Higher Education of Women in Oxford.

According to the rules of the association, its object is to establish and maintain a system of instruction having general reference to the Oxford Examination of Women over eighteen years of age. The association consists of (1) Ordinary members, being subscribers of not less than £1 per annum, or donors of not less than £10, or guarantors of not less than £5 a year for the first three years; and (2) Honorary members, being those persons who have been appointed to deliver lectures to women on behalf of this association (all professors and public lecturers of the University whose lectures are open to women being included), who are all entitled to vote at meetings of the association. The committee does not include in its scheme of instruction lectures on religious subjects, but without making distinctions on theological grounds, allows the rooms at its command to be used for such lectures as are adapted to the wants of different sections of the students.

1. The students consist of those (1) who propose to offer themselves for examination under the provisions of the Oxford Examination of Women over eighteen years of age; (2) who without offering themselves for this examination propose to avail themselves of the teaching provided by the association and of the terminal examinations. 2. Other ladies who desire to attend courses of lectures may obtain permission to do so on payment of a fee, the committee reserving to itself the power of deciding for what courses of lectures this permission will be granted. Application to be made through the secretaries. 3. All students who propose to offer themselves for the Further Examination of Women over eighteen years of age must either (*a*) have passed the "First Examination" (see Regulations for the Oxford "Examination of Women over eighteen years of age") or some other examination accepted by the delegates as equivalent; or (*b*) offer themselves for the First Examination on the first opportunity. 4. No Entrance examination will be required as a condition of attending the lectures and classes. 5. The academic year from October to June will be divided into three terms, corresponding generally to the terms of the University of Oxford. 6. Each class will meet twice a week for eight weeks in term. Papers will be set at intervals, and assistance given in the subjects treated of by the lecturer. 7. The fee for a single course of lectures will be two guineas, separate arrange-

ments being made for lectures under Section E (Physical Science), and for instruction in such subjects as are not specified in the printed Scheme of Lectures. 8. Examinations will be held at the end of each term in the subjects of the lectures provided by the association. Students who at such examinations fail on two consecutive occasions to satisfy the examiner in any one subject shall not continue to attend the lectures in that subject. Note 1. The Committee will not guarantee the delivery of any course of lectures where the number of applicants is less than three. In such cases, however, they will endeavour to meet the requirements of students as far as funds permit. Note 2. The Committee intend to form a fund in aid of deserving students who require help in defraying the expenses of their course. They also hope to found open scholarships and exhibitions to be awarded annually to those who distinguish themselves in the examinations. A scholarship of £20, tenable for two years, has been offered to the association by the Master of University. All students attending the lectures must reside in some house sanctioned by the committee. Inquiries respecting the accommodation in Oxford available for students should be addressed to Mrs. T. H. Green, 13, Banbury-road, Oxford.

GIRTON COLLEGE, CAMBRIDGE.

According to the report: This College is designed to hold, in relation to girls' schools and home teaching, a position analogous to that occupied by the universities towards the public schools for boys. The students' fees are fixed on such a scale as to secure that, the building having been provided, the institution shall be self-supporting. The College has been incorporated under the name of Girton College. The Memorandum of Association contains the following clauses:—

The objects for which the Association is established are to erect, maintain, and conduct a College for the higher education of women; to take such steps as from time to time may be thought most expedient and effectual to obtain for the students of the College admission to the examinations for degrees of the University of Cambridge, and, generally, to place the College in connection with that university.

Religious instruction and services, in accordance with the principles of the Church of England as by law established, shall be given and held in the said College or in connection therewith, but attendance on such instruction or services shall not be required from any student who, being of full age, or whose parents or guardians, if such student be not of full age, may object thereto in writing.

No person shall be admitted as a student of the College who shall not have

passed such an examination as to knowledge and ability as shall from time to time be required.

The College was opened some years ago in a hired house at Hitchin, for the reception of six students. In 1873 it was removed to a building erected for the purpose at Girton, near Cambridge. Since that time, the increasing number of students has made two considerable extensions necessary. The building at present forms two sides of a quadrangle, and comprises fifty-five sets of rooms for students, rooms for the Mistress and three resident lecturers, eight lecture rooms, a dining hall, a prayer room, and a hospital suite completely isolated. A laboratory and gymnasium adjoin the building.

The *College course* occupies three years, half of each year being spent in residence. The *academical year* is approximately thus divided: Michaelmas term, beginning about the middle of October, eight weeks; Lent term, beginning about the end of January, eight weeks; Easter term, beginning in April, eight weeks. The *charge for board, lodging, and instruction* is £35 per term, paid in advance. This sum covers the whole of the university and College charges. Candidates for admission are required to pass an Entrance examination and to furnish a satisfactory certificate of character. Students may enter either in the Michaelmas or Easter term. Those who enter at Easter gain an additional term for study. Three months' notice is required previous to withdrawal. Except in special cases students are not received under the age of eighteen.

Entrance Examination.—Examinations are held in London in March and June. A *fee* of £1 is charged. Forms of entry may be obtained from the Secretary. Application should be made for these forms in time to return them, filled up, with the examination fee, not later than January 31st for the March examination, and April 30th for the June examination. (Information as to the scholarships that will be offered for competition will be supplied by the Secretary.) The examination is conducted in writing. Every candidate is required to satisfy the examiners in: *Part I.*: *Preliminary*: 1. The Principles and Practice of Arithmetic. 2. English Grammar and Composition, with questions on the construction of sentences and meanings of words. 3. Physical and Political Geography. 4. English History. Candidates will be examined upon a special period. A general knowledge of the leading facts of English History is also required. *5. Scripture History (the New Testament). *Part II.*: *Optional Subjects*: Every candidate is also required to satisfy the examiners in two of

* In case of objection, this subject is not required, but notice must be given beforehand if the paper is not to be taken.

the following subjects, of which one must be a language. No candidate will be examined in more than five. 1. *Latin*: Easy passages for translation from Latin into English, and easy English sentences for translation into Latin, with questions on Grammar. 2. *Greek*: An easy passage of Attic Greek for translation into English, and easy English sentences for translation into Greek, with questions on Grammar. 3. *French*. 4. *German*. 5. *Algebra*: Addition, subtraction, multiplication and division of Algebraical quantities, fractions, square and cube roots, simple and quadratic equations, permutations and combinations, arithmetical and geometrical series, variation, ratio and proportion, scales of notation and the binomial theorem. A knowledge of Algebra up to and including simple equations, will enable a candidate to pass in this subject. 6. *Geometry*: Euclid, books i.—iv., vi., and xi., props. 1-21. A knowledge of books i.-iii. will enable a candidate to pass in this subject. 7. *Trigonometry*, up to and including the solution of triangles; the elementary parts of Conic Sections treated geometrically and analytically.

The following examinations may be *substituted* for the Entrance examination: 1. The Matriculation examination of the University of London; 2. The Matriculation examination of the Royal University of Ireland; 3. The Cambridge Higher Local examination, provided that Group B is included; 4. The examination for certificates of the Oxford and Cambridge Schools Examination Board; 5 and 6. The Cambridge or the Oxford Local Examination for Senior Students; 7. Three sections, including A and B, or section A and two Languages in section B of the Durham Local Examination for Senior Students; 8. The Edinburgh Local Examination for Honours, provided that the department of Languages is included; 9. The Senior Grade of the Irish Intermediate Examination if the candidate passes in five subjects exclusive of Drawing and Music, and inclusive of Arithmetic, English, and some other language; 10. The Glasgow Senior Local examination, provided that one of the optional subjects selected is taken from department F.

Course of Study.—Subjects of Instruction: Divinity; Modern Languages (English, French, and German); Classics; Mathematics, Pure and Mixed; Natural Science; Moral Science; History; Vocal Music. Any of the above subjects will be taught in the regular College course, provided that there are a sufficient number of students desirous of taking the subject to form a class. Students may select a course of study, but no student will be allowed to take more than a maximum or less than a minimum number of subjects.

Certificates.—A certificate, called a *Degree Certificate*, is conferred upon any student whose proficiency has been certified to the satisfaction of the College, according to the standard of any examinations qualifying for the B.A. degree of the University of Cambridge, provided that such student has fulfilled, so far as in the judgment of the College was practicable, all the conditions imposed for the time being by the University on candidates for degrees. A certificate, called a *College Certificate*, will be conferred upon any student who shall have passed, to the satisfaction of the College, examinations similar in subjects and standard to those qualifying for the B.A. degree of the University of Cambridge, the following deviations being permitted; the substitution of French and English or German and English for Latin or for Greek; the substitution of English, French, and German for both Latin and Greek; the ommission, in case of objection, of the Theological part of the examinations. Every student holding a degree or College certificate is entitled to the rights and privileges of certificated students.

Scholarships.—Scholarships and exhibitions (except those awarded upon special subjects) will, as a rule, be awarded for aggregate merit in the Entrance examination, but the examiners are empowered to disregard the aggregate in the case of excellence in Classics, or in Mathematics, or in the remaining subjects. The maximum of marks obtainable in each of the different subjects is as follows: Greek, 200; Latin, 200; Arithmetic, 100; Algebra, 150; Geometry, 150; Trigonometry and Conic Sections, 150; French, 125; German, 125; History, 100; English, 100; Scripture, 50; Geography, 50. All the scholarships are tenable for three years; only one can be held by the same student. The scholars will be required to read for a Degree Certificate in Honours. At the *March examination* the *Sir Francis Goldsmid Foundation scholarship* of the annual value of not less than £45 for three years is awarded. A *scholarship* of the value of £60 a year for three years is awarded to the best candidate at the Dublin centre. At the *June examination* the *Clothworkers' exhibition* of the value of £84 a year, for three years, is awarded to a lady whose means are inadequate to cover the whole cost of her College education, preference being given to one engaged in, or preparing for, the profession of teaching. A *scholarship* of the value of £60 a year, for three years, is offered at the Cambridge Higher Local examination for proficiency in Latin, credit being also given for knowledge of Greek and Mathematics.

Examinations for Certificates.—Degree Certificate: A Degree Certificate may be obtained by passing the examinations which qualify

either for the Cambridge Ordinary B.A. degree or for Honours. The examinations for the Ordinary B.A. degree are: I. The Previous examination; II. The General examination; III. The Special examination. I. The *Previous examination* consists of two parts, the *first* of which embraces four subjects—viz.: 1. One of the Four Gospels in the original Greek; 2. One of the Latin Classics; 3. One of the Greek Classics; 4. A paper of questions on Latin and Greek Grammar, with reference principally to the set Latin and Greek subjects. And the *second* the following four subjects—viz.: 1. Paley's Evidences; 2. Euclid, books i., ii., iii., definitions 1-10 of book v., and propositions 1-19 and A, of book vi.; 3. Arithmetic; 4. Elementary Algebra. The two parts of the examination may be taken at different times.

II. The subjects of the *General examination* are: 1. The Acts of the Apostles in the original Greek; 2. One of the Latin Classics; 3. One of the Greek Classics; 4. Algebra; 5. Elementary Statics; 6. Elementary Hydrostatics and Heat; 7. A voluntary paper containing one or more passages of English for translation into Latin Prose; 8. A voluntary paper containing one or more subjects for an English Essay, one or more passages foom Shakespeare or Milton to be punctuated and paraphrased, and questions on a play of Shakespeare.

III. The subjects of the *Special examinations*, one of which must be passed by candidates for the Ordinary degree, are: Theology, Logic, Political Economy, Law, History, Chemistry, Geology, Botany, Zoology (including Anatomy and Physiology), Mechanism and Applied Sciences.

The *examinations for Honours* are: I. The Previous examination, with the following additional subjects: 1. Algebra; 2. Elementary parts of Trigonometry; 3. Elementary Mechanics. II. Any one of the following Triposes: The Mathematical Tripos, including Natural Philosophy; the Classical Tripos, including Philology, History, and Philosophy; the Moral Sciences Tripos, including Moral and Political Philosophy, Mental Philosophy, Logic, and Political Economy; the Natural Sciences Tripos; the Theological Tripos; the Semitic Languages Tripos; the Indian Languages Tripos; the Law Tripos; the Historical Tripos.

College Certificate.—A College Certificate may be obtained on similar conditions to those for the Degree Certificate with permission to substitute Modern Languages for Classics, and to omit the Theological part of the examination.

College Expenses.—Inquiries being often made as to the total cost

of the College course and other matters of detail, it is believed that he following information may be of service: 1. The College fee of £35 per term (£105 a year) covers everything except purely personal expenses, such as washing and books for the student's private use. 2. The scholarships may be augmented in special cases of promising students who need further assistance. There are also possibilities of assistance by loan on easy terms to students unable to meet the whole expense. 3. Students are not obliged to reside for a certain time. A Certificate cannot be conferred on less than nine terms of residence, but a student who can only afford a shorter time may enter and share in the advantages of the College for such time as she may be able to stay.

Newnham College, Cambridge.

Terms of Admission.—Students are not admitted under the age of eighteen unless in exceptional circumstances. They are required to give satisfactory references, and no student is permitted to come into residence without the approval of the Principal. Students are admitted only on giving satisfactory evidence that they are qualified to profit by the course of study at Cambridge, such as Honours in the Cambridge Senior Local examination, or in any group, except group F, of the Higher Local examination. In default of honours, a pass in group B with Arithmetic, or a pass in group C may be accepted. The case of any student who has fulfilled none of these conditions will be subject to special consideration. The Principal may require any student to withdraw who, in her opinion, is not profiting by the course of study at Cambridge. No student who is not reading for a Tripos examination with a reasonable prospect of obtaining Honours will be allowed to reside for more than two years without special permission; and permission to reside as an out-student will in any case require to be renewed every year.

Expenses.—The charge for board and lodging and tuition is twenty-five guineas a term, payable in advance, with small charges for Laboratory and Gymnasium. There are three terms in the year, from eight to nine weeks in length, the same residence being required as for members of the University. The charge for board and lodging during the Long Vacation to students resident by the advice of the Principal, and regularly resident during term time, is one guinea a week. They are required to pay in addition for whatever instruction they need. Other persons who may be allowed to reside at Newnham College during the Long Vacation will, except in special cases, be charged two guineas a week for board and lodging.

Out Students.—The following may be admitted by the Council as out-students of the College, and they must become members of one of the halls: (1.) Women living with their parents or guardians in Cambridge. (2.) Women not generally resident in Cambridge who are *bonâ fide* students intending to pursue a definite course of study, who are over thirty years of age—or unable to afford the cost of residence in one of the halls, and accustomed to support themselves—or otherwise in exceptional circumstances. These students shall be bound to reside in lodgings approved by the Principal, and to conform to such rules as may be from time to time laid down for their guidance. The tuition fee for out-students is six guineas a term, payable in advance. Applications for admission as out-students must be sent to the Secretary.

House Rules for Students.—Students are expected to consult the Principal on receiving invitations from friends, and also if they wish to make excursions in the neighbourhood. Students are expected to inform the Principal what place of worship they choose for regular attendance. Students are expected to be at home, during the Michaelmas and Lent terms, at 6.30 p.m.; during the Easter Term at 8.30 p.m.; on Sundays, throughout the year, at 8.30 p.m. Rules concerning domestic arrangements of the household are left entirely to the discretion of the Principal. Students are expected to give three months notice before leaving. Failing this they are liable to be charged for the ensuing term, subject to the discretion of the Principal.

Tripos Examinations and Preliminary Examinations.—The complete normal course of study at Newnham College involves preparation for a Tripos examination, for which a residence of from nine to twelve terms is generally necessary.* Before admission to a Tripos examination, students must have obtained (i.) an Honour Certificate in the Higher Local examination, including a pass in Groups B and C; unless they have passed (ii.) the Previous examination with the additional subjects, or (iii.) one of the examinations which excuse members of the University from the Previous examination.† Instruction is

* The time varies as follows for different Triposes: (*a*) For the first part of the Mathematical, or for the Moral Sciences, Historical, or Law Tripos, 8 to 10 terms. (*b*) For the last part of the Mathematical, or for the Theological, Semitic or Indian Languages Tripos, 9 to 11 terms. (*c*) For the first part of the Classical or Natural Sciences Tripos, 5 to 10 terms. (*d*) For the second part of the Classical or Natural Sciences Tripos, 8 to 13 terms. All the examinations are in May and June, except those named under (*b*) which are in January and February. The first part of a Tripos can be taken without the second, but not the second without the first.

† These Examinations are: (*a*) The following parts of the Senior Local examination: Part I. and Religious Knowledge, including the original Greek of the Gospel, Latin, Greek, Euclid, Algebra, Trigonometry, and Applied Mathematics, provided a standard, defined by schedule, and intermediate between the pass standard and that of distinction, be attained. (*b*) The following parts of the Higher Local examination: Religious Knowledge, Greek, Latin, Arithmetic, Euclid, Algebra, Trigonometry, Statics. (*c*) Examinations of the Oxford and Cambridge Schools Examination Board, provided the certificate obtained show that the candidate has passed in Religious Knowledge with the Greek Text of the selected book, Greek, Latin, Elementary and Additional Mathematics, Algebra, Plane Trigonometry, Statics and Dynamics.

regularly provided at Newnham College in the subjects required for Tripos examinations,* and in most of the subjects of the Higher Local examination. Students are allowed to take the Previous examination (referred to above as ii.) if they prefer it; but the College does not undertake, except in special cases, to provide instruction in preparation for it. Students intending to go through a complete course will find preparation, during residence, for examination in subjects out of their special lines of study, to be an undesirable interference with their reading for the Tripos. They are therefore strongly advised to take before coming up as many as possible of the groups required for the Certificate (referred to above as i.), especially such of them as are unconnected with their chosen course. This is desirable also on the ground that students derive greater advantage from spending their time at Cambridge in advanced rather than in elementary work. There is a system of instruction by correspondence in connection with the College, intended to promote the self-education of women who are unable to obtain efficient oral teaching, and to assist them in preparing for the Higher Local examination. Information respecting it can be obtained from the Hon. Secretary.

Fees for University Examinations.—On admission (1) to any undivided Tripos, or (2) to the first part of the Classical Tripos, or (3) to the first and second parts of the Mathematical Tripos, or (4) to the first and second parts of the Natural Sciences Tripos,—£6. On admission (1) to the third part of the Mathematical Tripos, or (2) to the second part of the Classical Tripos,—£2. On admission to any undivided Tripos, or part of a divided Tripos, after having passed any of the examinations above mentioned,—£2. The fee for each of the three parts of the Previous Examination is £1.

Lectures.—Advanced students are admitted, under special conditions, to certain courses of intercollegiate lectures. These have included, during the past academical year, courses on Classics, Moral Sciences, Natural Sciences, and History. Certain of the lectures of Newnham College, of which a list is published at the beginning of each term, are open to women, other than students of the College, who have attained the age of seventeen. Permission to attend them is required, and application for this should be made to the Secretary. This permission when once obtained is valid for all subsequent courses of lectures, unless it be withdrawn by a special order of the Council. The *fee* for the term, for each course of lectures, is from one to two guineas,

* A more detailed account of the Tripos examinations, and of the alternative Preliminary examinations required before admission to them, and of the course of reading to be recommended to students preparing for any of these, will be found in a pamphlet which may be obtained on application to the Secretary.

according to the number of lectures delivered in a week; the first lecture of a course may be attended free of charge. The lists of lectures and tickets of admission are to be obtained from Macmillan and Bowes, 1, Trinity-street.

Scholarships and Exhibitions.—The Council of Newnham College offer various scholarships for competition in the Cambridge Higher Local examination, and also in the Cambridge Senior Local examination. Scholars are required to commence residence in the October following their election, unless they have not then attained the age of eighteen, or unless they are prevented by illness or other grave cause to be approved by the Council. Permission to defer residence will under no circumstances be granted for more than a year. Two scholarships cannot be held simultaneously by the same person. A certain number of exhibitions of £5 5s. a term are awarded to students needing assistance, regard being had to intellectual qualifications, and a written statement of circumstances being required. These exhibitions are tenable with scholarships. The Tripos fees of scholars and exhibitioners are paid by the College.

Loan Fund.—There is a Loan Fund at the disposal of the College, from which students of limited means may obtain help towards the payment of their fees. They will be expected to give adequate testimony respecting their intellectual qualifications, and to make a statement of their circumstances.

Objects and History.—Newnham College has been formed by the amalgamation of the Newnham Hall Company with the Association for Promoting the Higher Education of Women in Cambridge, and unites in itself the whole of the two bodies. The objects for which the College has been established are stated in the following extracts from the "Memorandum of Association":

> To establish and maintain at or near Cambridge a house or residence, or houses or residences, in which women students may reside and study.
>
> To provide for the instruction of women students, and for the delivery of lectures to such students, or to other women at or near Cambridge.
>
> The doing of such other things as are incidental or conducive to advancing education and learning among women in Cambridge and elsewhere.

Lectures for Women in Cambridge were first started in January, 1870. In October, 1871, in consequence of the demand from women at a distance to share the advantage of the lectures, Miss A. J. Clough took charge of a house at Cambridge, with five students; and, as the number of students steadily increased, Newnham Hall, now called the South Hall of Newnham College, was opened, under the care of Miss Clough, in October, 1875. In the following year, it was found

that this accommodation was not sufficient for the numbers who were desirous to come into residence, and temporary arrangements were made for them by the Association for Promoting the Higher Education of Women, until, in the spring of 1879, it was resolved to build the North Hall, which was completed and opened in October, 1880. To meet the increasing pressure for entrance, a new wing has been added to the South Hall, containing rooms for nine students. The South and North Halls of Newnham College are built at Newnham, on sites of two acres and a-half and three acres respectively, divided from one another only by a road. Together they give accommodation for the Principal and Vice-Principal, resident lecturers, and about seventy-seven students. Each student has one room, which serves both as a bedroom and study, and in each house there are a library, a dining hall, and other rooms for the common use of the students. The buildings of the North Hall include lecture rooms, and in the grounds of the South Hall are provided a gymnasium and a chemical laboratory for the use of all the students of the College.

In consequence of the success of students of Newnham and Girton in the informal examinations, several memorials were in 1880 sent up to the University of Cambridge, praying that the admission of women to Tripos examinations might be placed on a more stable footing. A Syndicate was appointed to consider the question, and their report was, on the 24th Feb., 1881, confirmed by Grace of the Senate, by a majority of 398 to 32. The report embodied the following recommendations:

1. That female students who have fulfilled the conditions respecting length of residence and standing which members of the University are required to fulfil be admitted to the Previous examination and the Tripos examinations.

2. That such residence shall be kept (*a*) at Girton College, or (*b*) at Newnham College, or (*c*) within the precincts of the University under the regulations of one or other of these colleges, or (*d*) in any similar institution within the precincts of the University, which may be recognised hereafter by the University by Grace of the Senate.

3. That certificates of residence shall be given by the authorities of Girton College or Newnham College, or other similar institution hereafter recognised by the University, in the same form as that which is customary in the case of members of the University.

4. That except as provided in Regulation 5, female students shall before admission to a Tripos examination have passed the Previous examination (including the Additional Subjects) or one of the examinations which excuse members of the University from the Previous examination.

5. That female students who have obtained an Honour Certificate in the Higher Local examination may be admitted to a Tripos examination, though such certificate does not cover the special portions of the Higher Local examination which are accepted by the University in lieu of parts or the whole of the Previous examination; provided that such students have passed in Group B (Language) and Group C (Mathematics).

6. That no female student shall be admitted to any part of any of the examinations of the University who is not recommended for admission by the authorities of the College or other institution under whose regulations she has resided.

7. That after each examination a class list of the female students who have satisfied the examiners shall be published by the examiners at the same time with the class list of members of the University, the standard for each class and the method of arrangement in each class being the same in the two class lists.

8. That in each class of female students in which the names are arranged in order of merit, the place which each of such students would have occupied in the corresponding class of members of the University shall be indicated.

9. That the examiners for a Tripos shall be at liberty to state, if the case be so, that a female student who has failed to satisfy them has in their opinion reached a standard equivalent to that required from members of the University for the Ordinary B.A. degree.

10. That to each female student who has satisfied the examiners in a Tripos examination a Certificate shall be given by the University stating the conditions under which she was admitted to the examinations of the University, the examinations in which she has satisfied the examiners, and the class and place in the class, if indicated, to which she has attained in each of such examinations.

11. That the above Regulations come into operation in the Easter Term, 1881.

12. That those students who at the time when these Regulations are approved by the Senate have already resided under the regulations of Girton College or Newnham College may on the recommendation of the authorities of such College reckon as residence under Regulation 2, either the whole of their past residence or such part of it only as the authorities of such College think to be reasonable, and their standing shall be regulated accordingly.

13. That such fees shall be paid by female students on admission to any part of any of the examinations of the University as may be hereafter determined by Grace of the Senate.

SECTION II.

The Mason Science College, Birmingham—the Normal School of Science and Royal School of Mines, South Kensington and Jermyn-street (Science and Art Department)—Royal College of Music, London—Institutions of various Denominations for Training Elementary School Teachers—Firth College, Sheffield.

The Mason Science College, Birmingham.

The College does not provide accommodation for residence, but a register of lodgings is kept in the Secretary's office for the use of students. For the convenience of residents at a distance, an arrangement has been made with the railway companies, on behalf of students under eighteen years of age, who enjoy the privilege of obtaining season tickets at half the usual rates.

Departments of Arts and Sciences.

The session is divided into the following terms: Winter term—commencing in October and terminating in December; Spring term—commencing in January and terminating in March; Summer term—commencing in April and terminating in June.

Admission of Students.—The professors will be glad to confer with intending students, or their parents, for the purpose of giving advice and information with regard to the classes to be attended. No student will be admitted under the age of sixteen without having passed a preliminary examination. Students *over* sixteen years of age are admitted without any examination whatever, but they are strongly recommended to consult the professors of the subjects they propose to study before finally selecting their classes. All departments of the College are open to both sexes on the same terms. Special arrangements are made for the convenience of ladies. Applications for admission to the classes must be made, either in writing or personally, to the Secretary, The Mason Science College, Birmingham. Students intending to take lodgings in Birmingham or the vicinity are requested to place themselves in communication with the Secretary.

Entrance Examination for Students under Sixteen Years of Age.—*Morning*, from 10 *to* 1: *Arithmetic*, including proportion and extraction of the square root; *Algebra*, to simple equations; *Geometry*, first book of Euclid or its equivalent. *Afternoon*, from 2 *to* 5: Paper on *English Grammar* and *Dictation*. *Vivâ-voce* examination

in either Greek, Latin, French, or German, at the choice of the candidate.

Common Rooms.—Two common rooms in the basement are provided for male students. Separate cloak and reading rooms in the east wing (ground floor) are reserved for the accommodation of female students.

Library, &c.—The College is provided with a *Library* and a *Geological Museum.*

Government Aid towards the Instruction of Science Teachers.—In accordance with a minute adopted by the Lords of the Committee of Privy Council on Education, June, 1881 (Science Form, No. 1126), their Lordships are prepared to pay three-fourths of the fees for courses of laboratory instruction, as stated below, for a limited number of teachers engaged in Science Teaching, on condition that satisfactory terminal reports of their progress (to be ascertained by examination), and of their conduct, be received at the end of the Winter, Spring, and Summer terms. Applications for this privilege must be made to the Secretary to the Science and Art Department, South Kensington. The selection of the applicants will rest with the Science and Art Department. The fees for two days a week for the session, from October to June, are: For the Chemical Laboratory, £9 9s.; for the Physical Laboratory, £7 7s.; for the Biological Laboratory, £7 7s. One-fourth of the fees for the whole session must be paid by the student on entrance, under the usual conditions of the College; the remaining three-fourths will be paid by the Department.

Wright Memorial Scholarships.—By an arrangement with the Birmingham School Board, the Council have granted six scholarships tenable at the College, to enable a scholar to go through a science course. The scholarships are tenable at King Edward's School for the time intervening between leaving the board school and entering the College. The College fees are remitted to the holders of these scholarships.

The Panton Geological prize, of the value of two guineas, is awarded to the best student in the class of Local Geology.

Examinations for Degrees.—The examinations for Degrees in Arts, Science, and Medicine, and for Honours, Exhibitions, and Scholarships conferred by the University of London, take place annually as follows: For the Matriculation, in January and June (the Queen's College, Birmingham, has been appointed a local centre for this examination); for the Intermediate examinations in Arts and Science, in July (the Mason Science College has been appointed a local centre for both these

examinations); for B.A. and B.Sc., in October and November; for M.A., in June; for D.Sc., in June; for the Intermediate Literature examination, in June; for D.Lit., in December; for Preliminary Scientific (M.B.), in July (the Mason Science College has been appointed a local centre for this examination); for Intermediate examination in Medicine, in July; for M.B., in November; for B.S., in December; for M.S., in December; for M.D., in December; for examination in subjects relating to Public Health, in December; for examination in the Art, Theory, and History of Teaching, in March.

Science Department.

§ I. *Mathematics.*—(A) *Pure Mathematics*: I. *Lower Junior Class*: Monday and Friday, from 11 to 12; Tuesday and Thursday, from 12 to 1. First term, Arithmetic; second term, Algebra; third term, Geometry. The subjects treated in this class will meet the requirements of the Matriculation examination of the University of London. *Fees*: For a term, £1 7s. 6d.; for the session, £3 10s. II. *Junior Class*: Monday, Tuesday, Thursday, and Friday, from 2 to 3. First term—Algebra, Geometry. Second term—Trigonometry. Third term—Elements of Plane Co-ordinate Geometry, as far as the Equations to the Straight Line and Circle; Elements of Solid Geometry, including the elementary properties of the Sphere; Mensuration of the Sphere, Cylinder, and Cone. Students attending this class will be expected to be acquainted with the elements of Arithmetic, Algebra, and Geometry as far as they are taught in the Lower Junior class. The subjects treated will meet the requirements of students preparing for the Intermediate Pass examinations in Arts and Science of the University of London. *Fees*: For a term, £1 7s. 6d.; for the session, £3 10s. III. *Senior Class*: This class will assemble four times a week, at hours to be fixed at the commencement of each term. First term—Algebra, Plane Trigonometry, Spherical Trigonometry. Second and third terms—Differential and Integral Calculus; Plane Co-ordinate Geometry, as far as equations of the second degree. The subjects treated in this class have been selected with reference to the requirements of the B.A. (Branch 4 (*a*)) and B.Sc. (Branch 1) Pass examinations of the University of London. *Fees*: For a term, £1 7s. 6d.; for the session, £3 10s. (B) *Applied Mathematics*: I. *Junior Class*: During the first and second terms only on Wednesday and Saturday, at hours to be fixed at the commencement of the session. First term—Kinetics; second term—Statics, Hydrostatics. Students attending this class will be expected to be acquainted with the elements of Plane Trigonometry as far as they are taught in the

Junior Class of Pure Mathematics. The subjects treated will include the Mixed Mathematics required for the Intermediate Pass examination in Science of the University of London. *Fees*: For either term, £1. II. *Senior Class*: During the first and second terms, on Wednesday and Saturday; during the third term, three times a week; at hours to be fixed at the commencement of each term. First and second terms—The subjects treated in the Junior class carried to a higher development, and also the following: The free motion of a particle under the action of Central Forces, or of any Forces; Constrained Motion; Resisted Motion; Impact of Spheres; Moments of Inertia; Rotation of rigid bodies; the Pendulum; Equilibrium of any system of forces acting on a rigid body; Equilibrium of jointed bars and flexible cords; the Principle of Virtual Velocities. Third term—Astronomy. Students attending this class during the first and second terms will be expected to be acquainted with the elements of the Differential and Integral Calculus as far as they are taught in the Senior Class of Pure Mathematics. Students attending during the third term may attend (without fee) the lectures on Spherical Trigonometry during the first term in the Senior class of Pure Mathematics, in order to obtain a knowledge of that subject sufficient to enable them to understand the lectures on Astronomy. The subjects treated will include the Mixed Mathematics required for the B.Sc. Pass examination (Branch 2). *Fees*: For the first or second term, £1; for the third term, £1 5s.; for the session, £3. (Students who are preparing for the B.A. Pass examination (Branch 4 *b*)—are recommended to attend the Junior Class of Applied Mathematics during the first and second terms; and the Senior class during the third term).

§ II.—*Physics*.—The complete course in Physics extends over three years. As a general rule, first year students are recommended to enter the Lower Junior class; second year students, or students who have matriculated in the University of London, should enter the Higher Junior class, and third year students the Senior class. This rule is, however, subject to modification according to the previous Mathematical and Physical training of the students. In connection with the first and second year courses, Practical classes will be held in the Physical Laboratory, which will occupy about two hours weekly. In these students will have an opportunity of going through short courses of Practical work, consisting chiefly of the repetition of experiments performed in the class. Members of the Senior class should take up the full Physical Laboratory course for at least one day weekly. In all the lecture classes, examples will be set at each lecture to be

worked out of class. The following is a detailed account of the various classes: *Lower Junior Class*—Winter and Spring terms—Dynamics, Statics, Hydrostatics. Summer term—Heat, Geometrical Optics. This course includes the subjects in which candidates are examined in Natural Philosophy at the Matriculation examination of the University of London. The lectures will be illustrated by experiments. In the first term they will be given by the professor, and in the two following terms by the demonstrator. Members of this class are recommended to join the *First Year Practical Class*: This class begins about the middle of the Winter term, and occupies about two hours weekly for the rest of the session. The work of the class consists chiefly of a repetition on the part of the students of experiments performed in the lectures. *Fees*: For the Lecture class of the session, £2 12s. 6d.; for one term, £1 7s.; for the Practical class for the session, £1 11s. 6d. Members of the Lower Junior class may attend the course of Magnetism and Electricity in the Higher Junior class in the Summer term. The additional fee for this will be £1 11s. 6d., including the Practical class, *Higher Junior Class*: Winter term—Mechanics, Hydrostatics, and Sound; Spring term—Heat and Light; Summer term—Magnetism and Electricity. This course includes the subjects in which candidates are examined in Physics at the first B.Sc. Pass examination of the University of London. The lectures are illustrated by experiments. Members of this class are recommended to join the *Second Year Practical Class*: This class occupies about two hours weekly. The work of the class consists chiefly of a repetition on the part of the students of experiments performed in the lectures. *Fees*: For the Lecture class for the session, £3 13s. 6d.; for one term, £1 17s. 6d.; for the Practical class for the session, £2 2s. *Senior Class*: This course includes the subjects in which candidates are examined in Physics at the Second B.Sc. Pass examination of the University of London. Members of the class will be expected to have a knowledge of Elementary Algebra and Trigonometry. They are recommended to take the Physical Laboratory course for at least one day weekly. *Fees*: For the session, £2 12s. 6d.; for one term, £1 7s.

Physical Laboratory Course.—The Laboratory will be open from 10 to 5 on Monday, Tuesday, Wednesday, Thursday, and Friday for students wishing to go through a course of Practical work more advanced than that of the Practical classes. Before entering on the course they will be expected to have a knowledge of Elementary Physics and Mathematics. They are recommended to join the Senior Lecture class in which the Mathematical theory of many of the experi-

ments will be discussed. To students who have passed through the course, opportunity will be given for further experiments or original research. *Fees*: For six hours per week for the session, £4; for one term, £2; for each succeeding six hours for the session, £2; for one term, £1.

§ III.—*Chemistry and Metallurgy.*—Twenty elementary lectures adapted to the requirements of beginners are given in the Winter term, and repeated after Christmas. *Lecture Days*: Mondays and Fridays at 12.0. The second course begins on the first Monday in March. Persons entirely unacquainted with Chemistry are recommended to attend these lectures before entering for the General course, which commences in October. Candidates for the Matriculation examination of the University of London may obtain the instruction they require for that examination by attending this course. *Fee*, £1 1s. *General Course*: The design of this lecture course is to offer to the student systematic instruction in the general principles of the science, as well as information regarding the properties of the most important elements and their compounds. Efforts are specially made to indicate the application of this kind of knowledge to useful purposes in the Arts and Manufactures. The General course of Lectures on Chemistry will be found useful by students who are afterwards to become Engineers, Architects, Builders, Brewers, or Manufacturers (such as Metallurgists, Alkali, Soap, Manure, Glass, or Cement Makers, Bleachers and Dyers, &c.). A short course of instruction in Practical Experimental Chemistry in the Laboratory is also strongly recommended to all who wish to know anything of Chemistry, the duration of such course depending upon the circumstances of each case. Persons about to become students, and desiring advice upon any of these matters, are invited to apply to the Professor, at the College. Students preparing for the Intermediate examination in Science and Preliminary Scientific (M.B.) examination of the University of London should attend the Lectures on Inorganic Chemistry (Winter and Spring terms). Candidates for B.Sc. and Intermediate examinations in Medicine will in general require only that part of the course (Summer term) which relates to Organic Chemistry. The full course, extending over three terms, will also satisfy the requirements of students preparing for the Associateship of the Institute of Chemistry, so far as attendance at lectures on General and Theoretical Chemistry is concerned. *Fees* (Winter and Spring terms) £3 3s. for a single term, or £5 5s. for the course from October to March; summer term, £2 2s., or to those students who have attended the first part of the general course, £1 1s.

Practical Chemistry.—Laboratory Practice: The object of the Laboratory course is to supply instruction in the principles and practice of Chemical Analysis, Qualitative and Quantitative, to enable the student to conduct original investigation, or to pursue practically the study of any special branch of Chemistry, with a view to its direct application to manufacturing or other purposes. Attention is given to the requirements of Medical and Pharmaceutical students. Candidates for Intermediate examination in Science, Preliminary Scientific (M.B.), B.Sc. and Intermediate examination in Medicine of the University of London, may obtain in the Laboratory of the College the instruction necessary. The three months course of Practical Chemistry for the B.Sc. Edinburgh, in the department of Public Health, may be taken in the Mason College Laboratory. The Ordinary course for Medical students is given on Tuesdays and Thursdays at 2 to 4 p.m. throughout the Summer term. *Fees*: All day—One term, 7 guineas; two terms, 13 guineas; three terms, 18 guineas. Three hours per day—4½ guineas, 8½ guineas, and 12 guineas respectively. *Practical Class*: *For Laboratory Students*: A Course of short demonstrations and exercises are given by the professor or one of his assistants once a week. All first-year students are required to attend, unless exempted for special reasons by the professor. No *fee*.

Metallurgy.—A course of about twenty lectures is given in the Winter and Spring terms (October to March), on Tuesday afternoons, at 2 o'clock, on the Principles and Practice of Metallurgy. The processes of extracting the chief useful metals from their ores are fully described and illustrated as far as possible by diagrams and specimens. *Fee* for the course, £1 1s.

Practical Metallurgy.—Arrangements will be made in the Chemical Laboratory for giving instruction in the usual processes of wet or dry assaying, in the preparation and analysis of alloys and various furnace products, and in the testing of metals by machinery (the last by arrangement with the Engineering Department of the College). Before entering upon this course, however, students will be expected to be familiar with Qualitative and Elementary Quantitative Analysis. *Fees*: Same as for the Chemical Laboratory. Students using the testing machinery will pay £1 1s. per term to the Engineering Department. Gas, fuel, water, and ordinary reagents are supplied by the College.

Excursions.—Permission has generally been obtained to visit some of the great factories in and near Birmingham, in which chemical and metallurgical industries are carried on. Students have thus had most valuable opportunities of gaining a practical acquaintance with some

branches of Applied Science. The privilege thus courteously granted by several manufacturers will, it is hoped, be enjoyed in every future session. The excursions are conducted by the professor.

Course of Study recommended to Students preparing for the Associate ship of the Institute of Chemistry.—First Year: 1. Elementry Mathematics; 2. Elementary Physics; 3. Elementary Chemistry; 4. French; 5. German. The elementary course of lectures in Chemistry will afford instruction sufficient for the Matriculation examination of the University of London. *Second Year*: 1. Special course of experiment in the Physical Laboratory; 2. Chemistry, general course of lectures on Inorganic and Organic Chemistry; 3. Chemical Laboratory (full time); 4. French and German, if necessary. Candidates for Intermediate Science and Preliminary Scientific (M.B.) examinations will require to attend only the lectures on Inorganic Chemistry, from October to March. They will also require to work in the Chemical Laboratory for about three days a week during two terms. *Third Year*: 1. Mineralogy, or Geology, or Technical Chemistry; 2. Chemical Laboratory (full time); 3. Special instruction in Chemistry. Students taking Chemistry for the B.Sc. examination (London) should attend the lectures on Organic Chemistry (April to June), and give as much time as possible throughout the session to practical work in the Chemical Laboratory. Candidates for the Intermediate examination in Medicine require the lectures on Organic Chemistry (April to June); also about two terms in the Chemical Laboratory.

Course of Study recommended to Students about to become Metallurgists.—First Year: 1. Elementary Mathematics; 2. Elementary Physics; 3. Elementary Chemistry; 4. French; 5. German. *Second Year*: 1. Special course of experiment in the Physical Laboratory; 2. Chemistry—General course of lectures on Inorganic Chemistry; 3. Mineralogy; 4. Mechanical Drawing; 5. Practical Chemistry in the Chemical Laboratory (as much time as can be spared); 6. French and German, if necessary. *Third Year*: 1. Geology; 2. Metallurgy (Lectures); 3. Assaying and general Laboratory Practice.

Chemistry for Medical Students.—The course of lectures on Chemistry required by students of Medicine in their first year is given in the Winter session, which extends from October to March. Students preparing for the Intermediate Science and Preliminary Scientific (M.B.) examinations of the University of London should attend during the Winter session only. Candidates for the B.Sc. and Intermediate examinations in Medicine will in general require only the more advanced part of the course on Organic Chemistry which is given in the summer. Students are requested to take notice that the

schedules will be signed of those only who attend at least three-fourths of the lectures and obtain at least one-fourth of the marks assigned to the paper given in the examination held at the end of the course in March. *Practical Chemistry*: The usual course of Practical Chemistry for Medical students is given on Tuesdays and Thursdays at 2 to 4 o'clock, in the Summer term. Every student attending this course must provide himself with the necessary apparatus.

Lectures on Metallurgy for Students in Dentistry.—Arrangements are made for the delivery of a short series of lectures on Dental Metallurgy when a sufficient number of persons signify to the Secretary, before the 7th of October, their desire to attend such a course.

§ IV.—*Zoology and Comparative Anatomy.* — General students intending to commence and continue the study of Biology are recommended to attend the Lecture courses in the following order: *First Year*: (i.) The Lectures and Laboratory Course in Elementary Biology in the Winter term; (ii.) the courses in Elementary Zoology in the Spring and Summer terms; and (iii.) the elementary lectures on Comparative Embryology in the Summer term. *Second Year*: The advanced course in Zoology should be taken. *Winter Term*: I. *Elementary Biology*: This course of lectures treats of the structure, life-history, and physiology of such simple unicellular plants and animals as the Yeast plant (Torula), Bacterium, Protococcus, Proteus animalcule (Amœba), the Bell animalcule (Vorticella), Paramecium, &c., and of the histology, morphology and physiology of such more complex, multicellular forms as the Stonewort (Chara), the Bracken Fern (Pteris), the Bean-plant, the freshwater Polype (Hydra), the freshwater Mussel (Anodon), the Earthworm, Lobster, Frog, and Rabbit. In the Practical class which will be conducted in connection with this course the above-mentioned animal and vegetable types will be dissected and microscopically examined, and instruction will be given in the use of the microscope and the mounting and preservation of microscopic specimens. This course is specially intended as an introduction to the study of the facts, methods, and principles of Biology, and to more advanced courses of instruction in Zoology, Botany, and Physiology. *Fee*: For the term, including the Laboratory course, £2 2s. (An additional charge of five shillings is required of students unprovided with microscope and dissecting instruments.) II. *Advanced Zoology*: A course of about twenty-five lectures is given on the Anatomy, Embryology, and Geographical Distribution of particular groups of Vertebrata and Invertebrata. *Fee* for Lectures and Laboratory course, £2 2s. III. *Lectures to Ladies*: A course of ten to twelve lectures is given during the Winter

term to Ladies on "Animal Life." These lectures, which are popular rather than technical in character, are intended to be of use to students preparing for the Oxford and Cambridge Local examination in Zoology, to those engaged in tuitional work in high schools and colleges, and also to those who may wish to possess some knowledge of the elementary principles of this branch of Biology. The lectures treat of the structure and mode of life of selected examples of the more important types of animal life. *Fee*, 10s. 6d. *Spring and Summer Terms*: IV. *Elementary Zoology*: A course of about fifty lectures on Elementary Zoology is commenced in the Spring term and continued to the end of the Summer term. *Practical Course*: By way of practically illustrating the lectures the student will examine or dissect certain animal types. *Fee*: For lectures and Practical course (including use of microscope, instruments, &c.), £2 2s. per term. V. *Comparative Embryology*: In the Summer term there is a course of from twelve to fifteen elementary lectures on ComparativeE mbryology. The course treats of the embryology and life history of selected groups of animal forms, and of the more important generalizations which have been deduced therefrom. In connection with these lectures there is a Practical course in which the student works at the embryology of a selected vertebrate type. *Fee*, including lectures and laboratory course: £1 1s.

London University Examinations.—Preliminary Scientific (M.B.) Examination: Candidates for this examination are recommended to attend the course on Elementary Biology in the Winter term, and the Elementary Zoology course in the Spring and Summer terms.

Bachelor of Science Examinations. — Intermediate examination: Candidates for the Intermediate examination in Science should attend the course in Elementary Biology. Candidates for Honours in Zoology may take, in addition, the course in Elementary Zoology. *B.Sc. examination*: In addition to the courses recommended for candidates for the Intermediate examination, the advanced courses in Zoology and Embryology should be taken by candidates intending to take the Zoology papers of the B.Sc. (Pass or Honours) examination.

Tutorial Class.—A Tutorial class for the revision of the subjects of the Preliminary Scientific (M.B.) and Intermediate examination in Science is conducted once a week in the Spring and Summer terms, and is open to all who have attended the Lecture courses recommended for these examinations. *Fee*: 10s. 6d.

Zoological Laboratory.—The Laboratory is open daily from 10 to 4 (Saturdays excepted). In addition to students taking up practical

work in connection with lectures, the Laboratory will be open to any who may wish to take up any special course of practical work, or to pursue original investigations, on payment of the terminal laboratory fee of two guineas.

§ V. *Botany and Vegetable Physiology.—Elementary Course*: An elementary course of about forty lectures on Comparative Vegetable Anatomy and Physiology and Systematic Botany is given during the months of May, June, and July. The first part of the course treats of the nature and functions of the vegetable cell, and the structure (Anatomy) and functions (Physiology) of the various organs of which the plant is composed; the life history of the plant in its vegetative aspect; and the special phenomena connected with the perpetuation of species (Reproduction). The second part of the course comprises a systematic study of the form of plants (Morphology) and the relationships of the more important groups into which the vegetable kingdom is divided. This course is intended (1) to meet the requirements of medical students; and (2) to serve as a comprehensive introduction to the study of Botany for those who are unacquainted with the subject. In connection with the lectures there is a course of practical instruction in Botany. The first part of this ends about the middle of June, and consists of a microscopical examination of plant tissues. The second part of the Laboratory course begins about the middle of June, and includes systematic plant instruction and description. The microscopical course is open to candidates for University examinations, and to other students by permission of the professor; the practical work in systematic Botany is open to all students attending the lecture course. During the latter half of the course weekly excursions are made (weather permitting) for the purpose of studying the local flora. Small classes are held in the Botanical Gardens, Edgbaston, at times which will be arranged. Students who attend the lectures of the Professor of Botany are admitted to the gardens, free, at all times when open, upon production of a ticket signed by the Professor. *Fee* (including practical course): £4 4s. *Advanced Course*: A course of about twenty lectures is given during the months of May and June on Special Morphology and Life History of the chief groups of Cryptogamia and Phanerogamia, viz.: Thallophyta, Bryophyta, Pteridophyta, Gymnospermia, Monocotyledones, and Dicotyledones. *Fee*: £1 1s. *Tutorial Class*: A Tutorial class for the revision of the Botany for the Preliminary Scientific (M.B.) and first B.Sc. examinations is held once a week during the Summer term, and is open to all those who are attending the lecture course for these examinations. *Fee*: 10s. 6d. Candidates for the College of Surgeons examinations,

the Preliminary Scientific and Intermediate examination in Science, should attend the elementary course; those for higher examinations and honours should attend the elementary course in their first year, and the advanced course through their second year. Students are requested to take notice that the schedules will be signed of those only who attend at least three-fourths of the lectures and obtain at least one-fourth of the marks assigned to the paper given in the examination held at the end of the course in July.

§ VI. *Physiology.—Systematic Physiology*: A course of one hundred lectures is delivered during the Winter and Spring terms on Human Physiology, including Microscopical Anatomy. Special arrangements are made for the convenience of ladies wishing to attend the class. *Fees*: For one term, £2 12s. 6d.; for the course, £4 4s. Students wishing to attend the course a second time are admitted at half the fees.

Practical Physiology.—Summer term: In this class, which consists of lectures, combined with laboratory work (in which each student takes part), instruction is given in (1) Minute Anatomy of the Body; (2) Chemical Physiology; (3) Experimental Physiology. *Fee*: £4 4s. Students wishing to attend the class a second time are admitted on payment of half the fees. All apparatus, including the use of a microscope, is provided. Arrangements as to time will be made to suit the convenience of students. *Physiological Laboratory*: The laboratories are open daily from 10 a.m. to 4 p.m. (Saturdays excepted) during each term, for the prosecution of original research. No students are admitted who have not attended a course of lectures on Physiology in this or some other college. *Fees*: For the term, £2 2s.; for the session, £5 5s.

§ VII. *Mental and Moral Science.—Psychology*: The senses; the intellect; the emotions; the will. *Logic. Ethics*: Theory of moral obligations; ethical systems. These subjects are necessary at the University of London for the M.S. and M.D., unless the candidate has already taken them as optional subjects at the B.A., M.A., B.Sc., or D.Sc.

§ VIII. *Geology and Mineralogy.*—There are two distinct series of lecture courses in this department. The normal or ordinary series is designed to meet the requirements of ordinary students in Geology. The extra or special series is planned to meet the desires of beginners, amateurs, and the general public. The normal or ordinary series in Geology embraces those subjects in which candidates are examined for the Second B.Sc. Pass examination of the University of London. Civil engineers, mining engineers, metallurgists, and architects should

take at least the first and second courses. Biologists, students of Medicine, and those interested mainly in the zoological bearings of the science may omit the so-called second course. All students are recommended to attend both the Local and Excursion classes during the Summer term. Fee for the normal series, Winter term, £2 2s. *Spring term: Historical Geology*: This course embraces an outline of the laws and generalisations of Stratigraphy and Palæontology, and treats of the nature of the several Geological Formations, their superposition, classification, subdivision, characteristic fossils, and geographical distribution in the British Isles. *Fee*: £2 2s. *Summer term*: Local Geology and Excursion Classes.

Second Course or Mining Geology.—Winter Term: Mineralogy and Lithology: Form and structure of minerals, nature of crystalline form, systems of crystalline form, isomorphism, pseudomorphism, &c.; chemical composition of minerals; classification of minerals; description and determination of chief rock-forming minerals, &c. Essential ingredients of rocks; lithological classification of rocks, divisions of crystalline rocks; acid, intermediate and basic rocks, determination of crystalline rocks. Non-crystalline rocks, arenaceous, argillaceous, calcareous and carbonaceous; alteration of non-crystalline rocks. Microscopical examination of rocks—rock section. Chemical examination of rocks, &c. *Fee*, £2 2s. *Spring term*: *Mining and Economic Geology*: Structure of rock masses, concretion, lamination, jointing, &c.; elevation, folding, contortion, inversion, rupture and displacement of rocks; methods of determining, interpreting, and mapping geological structure; geological plans, maps and sections. Relation of rock structure to the form of the ground; rocks and soils, fertility and barrenness of soils; drainage and water supply; rocks used in architecture and road making; fossil fuels, peat, lignite; coal and coal mining; metals, metallic ores, &c., their geological position and mode of occurrence; accepted methods of discovery and procuring for economic purposes. *Fee*, £2 2s. *Summer term*: Local Geology and Excursion Classes.

Third Course or Palæontology.—Winter term: Stratigraphy and Palæontology: *Part I.*: Classification of animals and plants; distribution of life upon the present surface of the globe, its laws and apparent anomalies; doctrine of specific centres, doctrine of evolution; petrifaction, vertical distribution of fossils, imperfection of the geological record — migration, homataxis — zones — colonies. Chronological classification of rocks; nomenclature of formations, epochs, and periods. Stratigraphy and Palæontology of the archæan time: archæan rocks and formations of Britain, Europe, and America

—eozoon. Palæozoic age; Petrology and Palæontology of Cambrian, Ordovician and Silurian — Trilobita — Brachiopoda — Graptolithina; Old Red Sandstone and Devonian—Eurypterida and Fishes; Carboniferous and Permian Rocks — Corals, Ferns, Polyzoa, &c. *Lecture days*: Tuesday, Thursday, and Friday, 12 to 1. *Fee*, £2 2s. *Spring Term*: *Stratigraphy and Palæontology*: *Part II.*: The Mesozoic Age: Triassic, Liassic and Jurassic — Salt Lakes, Reptiles, Ammonites, &c. Neocomian and Chalk; Foraminifera. The Tertiary Age—Eocene, Oligocene, Miocene, Pliocene, and their characteristic faunas. The Glacial period—glacial drift, moraines, erratic blocks, submergence and re-elevation of land; Interglacial Periods. Recent Period — Palæolithic Age, Neolithic Age: Bearing of evidences of Geology upon the present character and distribution of Life upon the Earth. *Lecture days*: Tuesday, and Friday, 12 to 1 p.m. *Fee*, £2 2s. *Summer term*: Local Geology and Excursion Classes.

Practical Course.—In connection with the three foregoing courses, a class is held in the Geological Laboratory and Museum, on the afternoons of Tuesday and Thursday, at 4 p.m., during the Winter, Spring, and Summer terms. The instruction given has reference to the actual study and examination of the minerals, rock specimens and fossils noticed in the lectures; the methods of sectioning, mounting, and determining of fossils; the preparation of rock specimens for the microscope and cabinet; the drawing of figures, maps, sections, &c. *Fee*: For each term, 10s. 6d.

Extra Series.—Spring term: *Physiography*: During the Spring term a course of ten lectures is given upon Physiography and Physical Geography. These lectures treat of the earth's surface features as known to us at present, and of the means by which they have been brought into existence. The subjects noticed embrace—the earth's contour and surface-divisions; the relief of the continents and ocean-basins; the atmosphere and its phenomena, winds and storms; water and its effects, in rain, in river, in icebergs, glaciers, &c.; heat, as exemplified in volcanoes, earthquakes, &c.; life, and its general distribution upon the face of the earth. This class is intended for those persons of leisure who desire to make themselves familiar with the present state of our knowledge of the surface of the globe; for the members of the higher classes in schools and colleges; and for those intending to join the Summer Excursion Class. *Fee*: For the course, 12s. 6d. *Summer Term*: *Elementary Geology*: During the Summer term a series of ten lectures of a popular and elementary character are given on the afternoons of Tuesday in each week, in the Elements of Geology: for amateurs and beginners in the science,

for the members of the Geological Excursion Class, &c. This course treats of the physical properties and composition of the more abundant rock-forming minerals: the distinctive character and more important features of the chief rocks and rock-formations of Britain. *Fee*: For the course, 12s. 6d. *Local or Field Geology*: The main object of this course is to afford the student a practical knowledge of the geological structure of the neighbourhood of Birmingham, and of the Midlands and the West of England generally. The class is projected not only for ordinary students of the science, but also for amateurs, collectors, miners, architects, and generally for those who take an interest in the geology of the district. *Fee*: For the course, £1 1s. *Excursion Class*: During the Summer term a Geological Excursion class is formed for the practical study of the rocks and fossils of the neighbourhood of Birmingham. *Fee*, £1 1s.

§ IX. *Civil and Mechanical Engineering.—General Arrangements*: The programme of study is arranged so that any one year of it may be taken with advantage by a student properly prepared for the work of that year. Students entering the first year's course must not be less than 16 years of age. At the end of the first year *ordinary class certificates of attendance and proficiency* alone will be given. At the end of the second year a *Junior Engineering Diploma* is given to those students who have earned it. At the end of the third year a *Senior Engineering Diploma* is given to those attaining the required degree of proficiency. *Fees* for the Non-technical classes, see the respective programmes. *Engineering Lectures*—1st year, £1 10s. per term, £3 10s. for the session; 2nd year, £2 per term, £4 10s. for the session; 3rd year, lectures, Designing, &c., £12 12s. for the session. Drawing Class—1st and 2nd years, £1 10s. per term. Class for practice with workshop instruments and surveying instruments—1st year, £1 for 1st or 2nd term, £2 for 3rd term. Engineering Laboratory—£5 5s. per term.

Art Departments.

§ I. *Classics.—Greek—Fees*: Winter term—Junior class, for one term, £1 5s.; for the Senior, £3 3s.; Middle class, £1 1s. Spring term—Junior class, £1 5s.; Senior class, £1 1s. Summer term—Junior class, £1 5s.; Senior class, £1 1s. The above fees, except when mentioned otherwise, are each for one term only.

Latin.—Winter term—Junior class, £1 5s. the term, or £3 3s. the session; Senior class, for a term, £1 1s.; Composition class, for a term, 10s. 6d. Spring term—Junior class, for a term, £1 5s.; Middle class, for a term, £1 1s.; Senior class, for a term, £1 1s. Summer

term—Junior class, for a term, £1 1s.; Middle class, for a term, £1 1s.; Composition class, for a term, 10s. 6d.

Section II. embraces English Language and Literature; *Section III.*, French Language and Literature; and *Section IV.*, German Language and Literature. The *fees*, generally, are £1 1s. the term, or £3 3s. the session.

THE NORMAL SCHOOL OF SCIENCE AND ROYAL SCHOOL OF MINES, SOUTH KENSINGTON AND JERMYN-STREET (*Science and Art Department*).

(The information here given is supplementary to that on pp. 156-7, under SCIENCE AND ART DEPARTMENT, SOUTH KENSINGTON.)

The Normal School of Science at South Kensington is intended primarily for the instruction of teachers and of students of the industrial classes selected by competition in the examinations of the Science and Art Department.

The Royal School of Mines is affiliated to the Normal School. Students entering for the Associateship of the School of Mines obtain their general scientific training in the Normal School.

Other students are admitted, so far as there may be accommodation for them, on the payment of fees fixed at a scale sufficiently high to prevent undue competition with institutions which do not receive State aid. The instruction in the Normal School is arranged in such a manner as to give the students a thorough training in the general principles of science, followed by advanced instruction on one or more special branches. The Associateship is granted in certain divisions or lines of study. Students who go through any one of the prescribed courses of instruction and pass the necessary examinations receive a certificate of Associateship of the Normal School or of the Royal School of Mines; but students who are not candidates for the Associateship are permitted to take up the course of instruction in one or more special branches of science, and on passing the examination receive a certificate to that effect. The Normal School and the Royal School of Mines are administered by a Council consisting of the professors and some of the lecturers, with a dean as Chairman, and a Registrar. The *Associateship of the Normal School of Science* is given in one or more of the following divisions: Mechanics, Physics, Chemistry, Biology, Geology, Agriculture. The *Associateship of the Royal School of Mines* is given in Metallurgy and Mining.

The session is divided into two terms. The first term begins about

October 1st and ends about the middle of February; the second term begins in the middle of February and ends about the middle of June. The Christmas holidays last about ten days, and the Easter holidays about a week. The course of instruction is the same for all the divisions during the first two years, after which it is specialised in accordance with the following scheme:

1st Year.—All Divisions: First Term—Chemistry (part i.). Second Term—Mechanics (part i.). Mathematics, Practical Geometry, and Mechanical Drawing throughout both terms.

2nd Year.—All Divisions: First Term—Physics (part i.); Elements of Astronomy. Second Term—Geology (part i.), including Mineralogy. Instruction in Mathematics and Drawing, so far as may be necessary, throughout both terms.

3rd Year.—(*a*) *Mechanics:* First Term—Mechanics (part ii.); Mathematics; Machine Drawing. Second Term—Mechanics (part iii.); Mathematics; Machine Drawing. (*b*) *Physics:* First Term—Physics (part ii.). Second Term—Physics (part iii.). (*c*) *Chemistry:* First Term—Chemistry (part ii.). Second Term—Chemistry (part iii.). (*d*) *Biology:* First Term—Biology (parts i. and ii.) Second Term—Biology (parts ii. and iii.) and (part iv. Botany). (*e*) *Geology:* First Term—Biology (parts i. and ii.) Second Term—Biology (part ii.) and part iv. (Botany). (*f*) *Agriculture:* First Term—Biology (parts i. and iii.). Second Term — Biology (part iii.) and (part iv. Botany.) Mechanics. (*g*) *Metallurgy:* First Term — Metallurgy (part i.); Assaying. Second Term—Metallurgy (part ii.); Assaying. (*h*) *Mining:* First Term — Mining; Metallurgy (part i.). Second Term—Surveying; Plan Drawing, and Assaying.

4th Year.—(*e*) *Geology:* First Term—Geology (part ii.) including special Petrography and Stratigraphical Palæontolgy. (*f*) *Agriculture:* First Term—Principles of Agriculture; Agricultural Chemistry.

Examinations are held at the end of each course of instruction and at such other periods as may be found necessary. On the results of these examinations the successful candidates are arranged in two classes, first and second. There are also Honours examinations for the subjects of the third and fourth years, the successful candidates being placed in order of merit. A student obtains the Associateship who passes in all the subjects of the first two years and of the special division he selects for his Associateship. A student who goes through the prescribed course of instruction in any subject and passes the final examination in it receives a certificate to that effect. The fees which are shown in the following table must be paid to the Registrar of the School before the commencement of each course.

	Part I.		Part II.	Part III.	Part IV.
	Lecs.	Lab.	Lecs. & Lab.	Lecs. & Lab.	Lecs. & Lab.
Chemistry	£5	£16	£18	£18	
Physics	5	12	16	16	
Biology with Botany	4	8	8	4	£8
Geology with Mineralogy	4	8	12		
Mechanics	4	6	10	10	
Metallurgy	2	16	18		
Assaying for Mining Students		12			
Mining	4	12			
Agriculture	4	10			
Astronomy	3				

Mathematics, £3 per term; Practical Geometry and Mechanical Drawing, £3 per term; Freehand Drawing £1 per term.

Thus the fees for the first two years amount to £75, and for the remainder of the course for the Associateship they vary from £30 to £40.

Both the private and the State-aided students are required to furnish themselves with certain instruments and apparatus before the commencement of the courses. These are enumerated in the syllabuses of the several subjects. Students who do not wish to attend the lectures are admitted for short periods to the laboratories, at the discretion of the professors. The fees for the Chemical and Metallurgical, and Physical laboratories are £5 per month; for the Biological and Geological laboratories, £4 per month.

Admission is granted to persons desirous of attending the lectures without the laboratory instruction, on payment of the lecture fees. Officers of the Army, Navy, and Civil Service, recommended by their respective Departments, are admitted to the lectures and laboratories at half the foregoing charges. Students may be re-examined on payment of a fee of £1 for each subject. Associates of the Normal School of Science and of the Royal School of Mines have the privilege of free admission to the Library and to all the courses of lectures. Science teachers actually engaged in teaching who have passed in the advanced stage, or in honours, in any subject in the May examination of the Science and Art Department, or in the December examination in Training Colleges, may attend any course of lectures on the payment of £1.

Exhibitions, Scholarships, and Prizes.

Royal Exhibitions.—There are twelve Royal Exhibitions to the Normal School of Science and the Royal School of Mines. They are of the value of £50 per annum each, and are tenable during the course for the Associateship, that is to say for three years, except in the case of students entering for the Associateship in Agriculture or

Geology, when they are tenable for three years and a half. Three or four exhibitions are therefore generally open for competition each year. They are competed for at the May examinations of the Science and Art Department, and are held from year to year, on the condition that the holder attends the courses regularly during those years, complies with all the rules laid down for his guidance, and passes the examinations required for the Associateship. The exhibitions entitle the holders to free admission to the lectures and laboratories.

Free Studentships.—Six free studentships are awarded annually under the same rules and conditions as the Royal exhibitions. They give the student free admission to the lectures and laboratories for three or three and a half years, as the case may be.

Teachers in Training.—About fifty teachers and students in Science Classes, who intend to become Science Teachers, are admitted free to the sessional courses of instruction at the Normal School. They receive second-class railway fare to and from London, and a maintenance allowance of 21s. per week while there.

Local Exhibitions.—Free instruction is given to local exhibitioners. The rules for the creation of local exhibitions to which the locality contributes £25 and the State £25 are to be found in the "Science Directory."

Royal Scholarships.—Four scholarships of £15 each are given to the students who have gained the greatest aggregate of marks in the examinations of the first year, and two scholarships of £25 to those pupils who have gained the greatest aggregate of marks in the examinations of the first two years. These scholarships are held on the condition that the student attends the courses of instruction regularly, is examined, and passes satisfactorily.

Medals and Prizes.—The Edward Forbes medal and prize, for the student who does best in Biology; the Murchison medal and prize, for the student who does best in Geology; the Tyndall prize, for the student who does best in Physics; the De la Beche medal, for the student who does best in the division of Mining; the Bessemer medal, for that student who does best in Metallurgy.

Summer Courses for Teachers.—Short courses of instruction are given annually, about July, in different branches of Science for the benefit of Teachers of Science Schools in the country. The courses last three weeks. About 200 teachers are admitted to them, and they receive second-class railway fare to and from London, and a bonus towards their incidental expenses of £2 each. (See "Science Directory.")

Working Men's Lectures.—Three or four courses of evening lectures

for working men are given annually during the winter months by the professors and lecturers of the Normal School and the School of Mines. The admission to each course of six lectures which will be given at South Kensington, Jermyn-street, or Bethnal Green, is 6d. The number of tickets is limited by the size of the lecture theatre.

ROYAL COLLEGE OF MUSIC, LONDON.

This institution, recently incorporated by Royal charter, is empowered to grant the degrees of Bachelor, Master, and Doctor in Music. At the time of writing, the regulations had not been issued.

INSTITUTIONS FOR TRAINING ELEMENTARY SCHOOL TEACHERS.

Institutions for this purpose are to be found at the places named below, under the several denominations specified:

Church of England.

1. Battersea.
2. Chelsea (St. Mark's College).
3. Chelsea, Whitelands (female).
4. Gray's-inn-road, Home and Colonial (female).
5. Brighton (female).
6. Bristol (female).
7. Carmarthen.
8. Carnarvon.
9. Cheltenham (both sexes).
10. Chester.
11. Chichester (female).
12. Culham.
13. Denston.
14. Derby (female).
15. Durham (both sexes).
16. Exeter.
17. Hockerell (female).
18. Lincoln (female).
19. Norwich (female).
20. Peterborough.
21. Ripon (female).
22. Salisbury (female).
23. Saltley (Birmingham).
24. Tolkenham (female).
25. Truro (female).
26. Warrington (female).
27. Winchester.
28. York.

Roman Catholic.

1. Hammersmith.
2. Mount Pleasant, Liverpool, and West Hill, Wandsworth, both female, and in connection with the Hammersmith institution.

Wesleyan.

1. Westminster.
2. Battersea (Southland's).

Congregational.

Homerton.

British and Foreign School Society.

1. Borough-road.
2. Stockwell (female).
3. Bangor.
4. Darlington.
5. Swansea.

FIRTH COLLEGE, SHEFFIELD.

See page 182.—Besides the entrance exhibitions set forth in the text, a recent prospectus mentions the *Earnshaw scholarship*, of the annual value of about £70, for students proceeding to the Universities of Oxford or Cambridge.

The following details may be taken in lieu of those given in the text, as being in accordance with the prospectus just mentioned:

Subjects of Instruction, Fees, &c.—Each subject marked with an asterisk is given in three yearly courses: *Mathematics, £2 12s. 6d. per course; *Physics, £2 12s. 6d.; *Practical Class in Physics, £2 12s. 6d.; *Classics (Greek and Latin), £4 4s.; either language separately, £2 12s. 6d.; English Literature, 10s. 6d. per term; Chemistry, £3 13s. 6d. per course (given in two courses); Analytical Chemistry, £1 11s. 6d. the course. Practical Chemistry: *Sessional Fees*: 4 hours per week, £3 4s.; 6 hours, £4 8s.; 8 hours, £5 12s.; 10 hours, £6 16s.; 12 hours, £8; 15 hours, £9 14s.; 18 hours, £11 4s.; 24 hours, £14; 30 hours, £16 16s.; 36 hours, £19 2s.; 42 hours, £21. *Fees for shorter periods*: For one month, £3 13s. 6d.; two months, £6 6s.; three months, £9 9s.; four months, £12 1s. 6d.; five months, £14 3s. 6d. Students entering for short periods are entitled to work on every day in the week. French and German, for both languages, £4 4s. the course; for either language separately, £2 12s. 6d.; French Literature, 7s. 6d. the course.

Evening Lectures and Classes: Mathematics, 10s. 6d. per course (the instruction is given in two consecutive years). Electricity and Magnetism, 9s. the course. Classics (Greek and Latin), fee for the course, 10s. 6d. for each language; English History, 5s. per term, or 9s. per two terms; Chemistry, 5s. per term, or 9s. per two terms; Practical Chemistry—Fees as in previous paragraph; French conversation, &c., 10s. 6d. the course—advanced, 10s. 6d.; Coal Mining, 5s. the course; Metallurgy.

SECTION III.

Royal University of Ireland—Royal Irish Academy of Music.

ROYAL UNIVERSITY OF IRELAND.

The following are more detailed particulars of the *Matriculation examination* conducted by this body: *Latin*: *Pass*: One poetical and one prose work, both selected; Grammar; Translation of simple sentences into Latin; outlines of Roman History. *Honours*: In addition to the Pass course, other selected books; advanced Grammar; Latin Composition; a selected period of Roman History. *Greek*: *Pass*: One poetical and one prose work, selected; Greek Grammar; outlines of Greek History. *Honours*: In addition to the Pass course, one poetical and one prose work; more advanced Grammar; a period of Greek History. *French*: *Pass*: French Grammar; two short works, selected; easy sentences for translation into French. *Honours*: In addition to the Pass course, two other works; detached sentences, testing the candidate's knowledge of the principal rules of the Accidence and the elements of Syntax for translation into French. *German*: *Pass*: Grammar; two short works; easy sentences for

translation into German. *Honours*: Two other works; detached sentences for translation into German. *Italian*: *Pass*: Grammar, including Accidence and the elementary rules of Syntax; two easy works; easy sentences for translation into Italian. *Honours*: In addition to the Pass course, a third work; detached sentences testing the candidate's knowledge of the principal rules of the Accidence and the elements of Syntax for translation into Italian. *Spanish*: *Pass*: Grammar; translation from two easy works; translation into Spanish. *Honours*: In addition to the Pass course, other works; translation of detached sentences into Spanish. *Celtic*: *Pass*: Irish Grammar; two short easy works, or portions of two works; translation of easy sentences into Irish. *Honours*: In addition to the Pass course, Annala Rioghachta Eireann, 1598 to 1603 inclusive; Oidhe Chloinne Lir.; more advanced Grammar; translation into Irish; History of Ireland during the reign of Elizabeth. *Hebrew*: *Pass*: Elements of Grammar, including letters and their properties, words and their inflexions; Genesis, ch. i. to x.; Book of Ruth. *Honours*: In addition to the Pass course, more advanced Grammar; Psalms, i. to xv. *English Language*: *Pass*: English Grammar; one poetical and one prose work; outlines of Modern Geography; a short composition. *Honours*: In addition to the Pass course, other poetical and prose works; more advanced questions in Grammar and Philology; a short essay. *Elementary Mathematics*: *Pass*: Arithmetic; Algebra to simple equations inclusive; Geometry—Euclid, books i. and ii., or the subjects thereof. *Honours*: The Pass subjects, together with: Algebra, more advanced; Geometry—Euclid, books iii., iv., vi., with definitions of book v. or the subjects thereof; Deductions. *Experimental Physics*: *Pass*: The elementary facts of Mechanics, Hydrostatics, and Pneumatics, treated experimentally. *Honours*: The Honours papers will be set in the subjects appointed for the Pass examination, but will be of a more difficult character. The principle of extended work in the Pass subjects, on which the Honours section of the Matriculation examination is conducted, is applied to the Honours sections of all further examinations.

ROYAL IRISH ACADEMY OF MUSIC.

See page 243.—A prospectus issued since the account of this institution was printed puts the Pianoforte Class (morning and evening) at £7 per annum instead of £10; and the Choir Class at 10s. 6d. instead of £1.

SECTION IV.

UNIVERSITY OF MELBOURNE.

Matriculation Examination.—On October 27th, 1882, it was decided to amend the rule relating to the subject of Geometry. This now reads: "Geometry, the substance of Euclid, books i., ii., iii.; no deductions shall be set."

SECTION V.

Superior Education in Spain—Superior Education in Denmark—University of Paris: Baccalauréat ès Lettres—University of Gand: Preparatory School of Arts and Manufactures; Special School of Arts and Manufactures—Gymnasium of Geneva.

SUPERIOR EDUCATION IN SPAIN.

The special report alluded to on page 525, and which was promised but had not come to hand when this portion of the work was set up, has since been forwarded by the Spanish Government. But as it merely embodies the information given on the page mentioned, and which had been gathered from other sources, it is unnecessary to deal with it further.

SUPERIOR EDUCATION IN DENMARK.

The University of Copenhagen has sixty professors and 1250 students. The University library contains 275,000 volumes. For special education, Denmark has a Royal Veterinary and Agricultural School, with sixteen professors and about 200 students; a polytechnic school, with thirteen professors and 150 students; two academies of fine arts; one technical school; eight navigation schools; a military academy; and several charitable institutions.

UNIVERSITY OF PARIS.

The following details are referred to at page 529:

Baccalauréat ès Lettres.

The *examinations* for this degree take place twice yearly; they are public. Candidates must have attained the age of sixteen years. They must produce evidence of age, present in a prescribed form a request for admission to the examination, and name the living language in which they desire to be examined. There are two examinations for the Baccalauréat, and each examination is both written and oral.

First Examination.—Written part: Translation from the Latin; French Composition; the German or English Language. *Oral part*: Explanations of prescribed Latin, Greek, and French authors. Candidates who pass in German or English may be examined if they wish in Italian or Spanish, European History, French History, Geography of Europe (especially of France), Political, Physical and General.

Second Examination.—Written part: French Composition; a Thesis on a scientific subject of an elementary character. *Oral part*: Psychology; Logic; Moral Philosophy; Political Economy; Metaphysics; History of Philosophy; Latin, French, and Greek; History of France; Arithmetic; Algebra; Geometry; Physics; Rhetoric; Chemistry; Comparative Anatomy and Physiology; Vegetable Anatomy and Physiology.

Fees.—Total, 120fr.

Form of application for admission to the examination for candidates who are of full age:

I, the undersigned (*full name*), born at , department of (date), domiciled at , department of , present to the Rector of the Academy of , conformable to the regulation of 19th June, 1880, the request to be admitted to the (*First* or *Second*) examination before the Faculty of Letters at , in virtue of my notification of birth which I place in his hands, and which attests that I am of age. The said request written and signed before the Mayor of the Commune of , where I reside.

In the case of candidates who have pursued their studies out of France this form is not required.

The Faculty of Letters is established at various centres through France. These are; Paris, Aix, Besançon, Bordeaux, Caen, Clermont, Dijon, Douai, Grenoble, Lyon, Montpellier, Nancy, Poitiers, Rennes, Toulouse, Ajaccio, Amiens, Angers, Bastia, Brest, Brives, Carcasonne, Chambéry, Limoges, Nantes, Nice, Pau, Rodey, Rouen, Tournon.

The particular books in which candidates are liable to be examined are fixed, and their titles and parts published in the *Programme de l'Examen de Baccalauréat ès Lettres*. The books and authors are divided into classes. Candidates are allowed to choose in each class and for each language the particular authors and books they may prefer. Two works of different authors must be selected in each language.

French Authors.—Class A: Bossuet—Discours sur l'Histoire Universelle (3e partie); Montesquieu—Grandeur et Décadence des Romains; Corneille—Horace, Cinna; Racine—Andromaque, Les

Plaideurs. *Class B*: Chanson de Roland; Joinville; Montaigne—Extraits; Corneille—Le Cid, Nicomède; La Bruyère; Racine—Iphigénie; Bossuet—Oraisons Funèbres; Molière—L'Avare, Les Femmes Savantes; La Fontaine—Fables (the first six books) *Class of Rhetoric*: Pascal—Pensées Provinciales (i., ii., and xiii.); Bossuet—Sermons Choisis; La Bruyère; Fénelon—Lettre à l'Académie; Buffon—Discours sur le Style; Voltaire—Siècle de Louis XIV., Lettres Choisis; Corneille—Théâtre; Racine—Théâtre; Molière—Le Misanthrope, Tartufe; Boileau—Art Poétique; La Fontaine—Fables (the six last books).

Latin Authors.—Class A.: Cicéro—Pro Archia Poeta, De Suppliciis, De Senectute; Salluste; Tite Live, livres 21 and 22; Virgile—Églogues, Episodes des Géorgiques, Eneide (livres iii., iv., v.). *Class B.*: Tite Live, livres xxiii., xxiv., xxv. Cicéron—Catalinaires, le Songe de Scipion; Tacite—Vie d'Agricola, Annales (livres i., ii., iii.); Virgile—Eneide (livres vi., vii., and viii.); Horace—Odes. *Class of Rhetoric*: Cicéron: Pro Milone, le Philippique, Choix de Lettres; Tite Live, livres xxvi. and xxx.; Taciti—Annales (livres xiv. et xv.); Plini—Choix de Lettres; Plauti—Extraits; Térence—Adelphis, Lucrèce, Extraits; Virgile—Enéide (livres ix. to xii.); Horace—Épitres.

Greek Authors.—Class A.: Lucien—Dialogues des Morts; Hérodote—Morceaux Choisis; Xénophon—Anabase. *Class B.*: Homère—Odyssée (livres i., ii., vi., xi., and xii.); Xénophon—Cyropédie, Economique; Hérodoti—Morceaux Choisis; Plutarque—Vie d'Alexandre, Vie de Démosthène, Vie de Ciceron; Euripide—Iphigénie à Aulis, Hécube, Alcesti. *Class of Rhetoric*: Thucydide—Extraits; Démosthène—Philippiques, Discours sur la Couronne; Platon—Criton, Apologie; Homère—Iliade (livres i., ii., xviii., and xxii.); Eschyle—Extraits; Sophocle—Oedipe Roi, Oedipe à Colone, Antigone; Xenophon—Mémorables; Aristophane—Extraits.

German.—Class A.: Morceaux Choisis; Goethe—Campagne de France; Chamisso—Pierre Schlemihl; Auerbach—Récits Villageois de la Forêt-Noire; Schiller—Guillaume Tell, Marie Stuart. *Class B.*: Morceaux Choisis; Goethe—Goetz de Berlichingen, Voyage en Italie, Herniann et Dorothée; Schiller—Wallenstein, Poésies Lyriques, Soulèvement des Pays Bas; Hauff—Lichenstein. *Class of Rhetoric*: Morceaux Choisis; Lessing—Dramaturgie de Hambourg; Goethe—Le Tasse, Iphigénie, Poésies Lyriques; Schiller—La Fiancée de Messine, Guerre de Trente Ans.

English.—Class A.: Morceaux Choisis; Macaulay—Histoire d'Angleterre, i.; Walter Scott—Un Roman; Shakspeare—Jules César; Dickens—Histoire d'Angleterre. *Class B.*: Morceaux Choisis;

Dickens—David Copperfield; W. Irving—Livre d'Esquisses; Goldsmith—Le Village Abandonné, Le Voyageur; Shakspeare—Macbeth; Walter Scott—Un Roman. *Class of Rhetoric*: Morceaux Choisis; Dickens—Nicolas Nickleby; Walter Scott—Les Puritanes d'Ecosse; Shakspeare—Henry V., Richard III., Othello; Byron—Childe Harold.

Information regarding the scope of the examination in the subjects of History, Science, and Philosophy may be found in the "Nouveau Programme de l'Examen du Baccalauréat ès Lettres," which may be obtained from Messrs. Hachette, of Paris, through their establishment at Charing Cross. Here it will suffice to say that the requirements of the examiners may be satisfied by an acquaintance with the ordinary text-books used in the higher classes at schools.

UNIVERSITY OF GAND.

(The information appended is supplementary to that given on pp. 553-7).

Preparatory School of Arts and Manufactures.

This school is intended to prepare students for the Special School.

Conditions of Admission.—An examination has to be passed in the following subjects: Arithmetic, Algebra, including equations of the second degree; Elementary Geometry; Rectilinear Trigonometry and Trigonometrical tables; the French or Dutch Language; Design.

The *examinations* take place in October each year; the date is announced in the *Moniteur* about the middle of June. The *fee* for the entrance examination is 30fr., besides 2fr. for the diploma, and 3fr. for the hall porter.

The *curriculum* at the Preparatory School is of two years' duration. The session commences about the middle of October.

The *subjects of study* comprise: *First Year*: Elements of Descriptive Geometry; Principles of and Exercises in Analysis; Experimental Physics; Elementary Chemistry; Exercises on Mathematical Synthesis; Practical Chemistry; Elementary Principles of Mechanical Engineering. *Second Year*: Mathematical Descriptive Geometry; Analysis; General Chemistry; Elements of Architecture; Elements of Mechanics; Elementary Principles of Mechanical Engineering; Practical Chemistry; Architecture. The *fee* for each of the inscriptions is 150fr.; there are other payments, making, with the foregoing and that exacted at the Entrance examination, about 445fr. for the curriculum.

Special School of Arts and Manufactures.

The school is particularly designed to impart technical instruction to persons desirous of following the Arts or Manufactures, whether as proprietors or managers, &c. The instruction embraces all the knowledge necessary for the application of the sciences to the various departments of manufacturing industry.

Conditions of Admission.—The General examination for the admission to the Special School is divided into two partial examinations on the matters taught in each of the two years of study at the Preparatory School. The first examination is open to all the students; to be admitted to the second it is necessary to have passed the first. The examinations take place each year in the month of September; the date of it is announced in the *Moniteur* about the middle of June.

The *fee* for each of the partial examinations is 30fr. For the diploma 2fr. is charged, and the hall porter's fee is 3fr.

The curriculum is of two years' duration.

The course for the title of *Industrial Engineer* comprises: First year: Mechanical Industry; Machinery, the Steam Engine; Industrial Physics; Civil Architecture; Industrial Chemistry; Political Economy. Second year: Technology of Textile Industry; Mechanical Engineering; Analytical Chemistry; Commercial Geography, &c. *Fees*: 420fr. for the two years' course, and 100fr. for examination fees, besides 2fr. for the diploma and 3fr. for the hall porter. The diploma of Industrial Engineer is awarded every September. There are two *examinations*, the first is opened to all students who have passed the Entrance examination. To be admitted to the second it is necessary to have passed the first and it is required of the candidate for the former that the period which may have elapsed since the passing of the first shall not exceed two years.

Syllabus of Examinations for Admission to the Preparatory School of Civil Engineering, and to the Preparatory School of Arts, Manufactures, and Mines.

1. French; Analysis and Composition. 2. Latin; one of the three Flemish tongues, German, or English. In Latin the candidate is required to translate from that language. In Flemish, German, and English the work is chiefly limited to translating into French. 3. History and Geography, General, and of Belgium in particular. Candidates are required to design outline maps from memory; in the case of Belgium, this would include the principal roads and rivers. 4. Mathematics; Arithmetic; Algebra; Plane and Solid Geometry; Plane Trigonometry; Drawing.

GYMNASIUM OF GENEVA.

This comprises five sections: A Classical section enforcing a two years' curriculum, and designed for pupils leaving the Classical section of the College, and leading to the degree of Bachelor of Letters; a Technical section, intended to fit students for the Polytechnic, and of three years duration in the case of pupils issuing from the Classical section of the College, in the case of pupils quitting the Industrial section the curriculum being of two years duration; a Commercial section, giving a three years' course to pupils quitting the Classical section of the Gymnasium, and a two years' course to pupils leaving the Industrial section; a Classical Educational section, of three years, for pupils leaving the Classical section of the College; a non-classical Educational section, giving two years' instruction, and intended for pupils leaving one or other of the two sections of the College.

The scholastic year is divided into two sessions, and comprises forty weeks. The opening of the Gymnasium occurs about the beginning of August. The first session ends in January; the second session commences the Monday following the examinations, and terminates in June.

At the end of each session examinations are held on the subjects taught during the session. The examinations are public.

Fees.—The fee for inscription is, for regular pupils, 40 francs per annum for each section, except for Educational Science, for which 20 francs only is payable. These fees are payable in instalments.

Occasional pupils—that is, those who enter for one or a few courses only—pay 2 francs per session for each hour in the week during which they receive instruction.

SECTION VI.

UNIVERSITY OF CINCINNATI.

Instruction is free to *bonâ fide* residents of Cincinnati. Non-residents are charged 60 dols. a year for any full course of study, or for special studies involving more than seven recitations a week. Non-resident special students taking seven hours a week or less are charged 30 dols. a year. Tuition fees for the year must be paid before the student can be enrolled in his classes. But students of the Normal Law and Theological Schools of Cincinnati may pursue special studies in the University classes free of charge. Special students in Chemistry

taking more than three laboratory exercises a week are charged 15 dols. a term for chemicals, plus breakage. Other students in Chemistry are charged 5 dols. a term for chemicals, plus breakage. Every student in Physics or in Chemistry is charged 5 dols. per annum for wear and tear of apparatus, and every laboratory student is required to file with the Clerk of the Board a bond signed by two responsible persons, one of whom must be a citizen of Cincinnati, guaranteeing the University against loss from damage to apparatus.

The privileges of the University are extended to pupils of both sexes. The examination for admission embraces: Latin translation—selected books; Greek—selected books; Arithmetic, Algebra, through Permutations and Combinations; Geometry, complete; Plane Trigonometry; the outlines of General History.

There are six undergraduate courses of study: Classical, Scientific, Letters, Philosophy, Civil Engineering, and the Normal course. The degrees granted after the completion of these courses, excepting the Normal, are severally: Bachelor of Arts, Bachelor of Science, Bachelor of Letters, Bachelor of Philosophy, Civil Engineer. A diploma is granted to those completing the Normal course. A four years' curriculum is required for each of the degrees mentioned; for the Normal course diploma a two years' curriculum is required.

The degree of *Master of Arts* is open to Bachelors of Arts, and the degree of *Master of Letters* to Bachelors of Letters of Cincinnati, and such other Bachelors of Arts or Letters as shall have satisfied the Academic Faculty that they have received an equivalent training. The degree of Master of Science is open to Bachelors of Science and Civil Engineers of the University of Cincinnati, and to other Bachelors of Science upon terms similar to those indicated in the preceding paragraph. A candidate for the degree of Master of Arts, Letters, or of Science may so graduate, if otherwise qualified, on the following conditions: That after having received his Bachelor's degree he shall have pursued at this University for not less than one year a prescribed course of liberal study under the direction of the Faculty; that he shall have passed a satisfactory examination upon the course of study pursued; that he shall have presented a satisfactory Thesis. The degree of Doctor of Philosophy is open to graduates of the Academic department of the University of Cincinnati, and to other Bachelors of Arts, Letters, Philosophy, or Science. This degree is given after a prescribed post-graduate course of liberal study at the University of two years or more, but to those only who give proof of very considerable acquirements and maturity of judgment. It is granted, however, not with reference to any specified term of routine study, but solely on

the merits of the applicant. He must pass an examination and present a dissertation, which shall embody an original investigation in some department of knowledge.

School of Design.—Candidates for admission must be not less than thirteen years of age, and must furnish security for the payment of any damage done to the works of art or other property belonging to the school. All candidates are required to pass an Entrance examination in drawing. The first month after admission the candidate is considered to be on probation. Instruction in the School of Design is free to all *bonâ fide* residents of Cincinnati. Non-residents are charged 60 dols. per annum for attendance on the day classes and 30 dols. for attendance on the night classes. Section fees must be paid annually in advance. An annual fee of 8 dols. for day classes and 3 dols. for night classes is charged for the use of models, casts, drawings, books, and other apparatus.

There is an annual *exhibition* of the work of the School. Pupils who have completed with credit any course of instruction prescribed in the School are entitled to Diplomas of Graduation. These diplomas are graded to correspond with the three orders of merit into which the work shown at the annual exhibition is classified. The final (fifth year) exhibition of the work of the pupil determines the grade of his diploma. Students who shall have pursued with credit for not less than three years any course of instruction in the School of Design will be entitled to receive from the Faculty a certificate stating their qualifications.

Astronomical Department.—A thorough course of undergraduate study has been laid out, and students who shall have pursued it successfully, having passed satisfactory examinations and furnished an acceptable Thesis, will be recommended for the degree of Bachelor of Science. The course will extend over four years, and the requirements for admission thereto are the same as for the course in Science. Any Bachelor of Arts or of Science, otherwise qualified, who shall have pursued with credit a prescribed course of study for at least two years, passed a satisfactory examination and presented an original Thesis, will be recommended for such post-graduate degree as his maturity and ability may warrant.

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ALSO FOR HALLS, WINDOWS, FERNERIES, STAIRCASES, RECESSES, BALLS, DINING ROOMS, BAZAARS, CONCERTS, FLOWER SHOWS, CONVERSAZIONES, GARDEN PARTIES, EXHIBITIONS, &c.

SPECIAL ADVANTAGES.

They are Portable. Cannot get out of Order. Cannot Overflow. Automatic in Action. Combining Aquarium and Fern or Flower Stand with Fountain. Absence of Springs, Valves, Weights, Chains, Clockwork, or other objectionable parts. Variety of Ornamental Jets may be used. The same Water utilised for a Length of Time. Self-Contained, requiring no Reservoir or Laying On of Water. Great Simplicity of Action. Will Play for hours without attention, and can be Recharged by a boy or servant in from three to five minutes. When Charged is Always Ready to Play, even if allowed to remain for months untouched. Artistically Decorated, can be harmoniously decorated with surroundings in Drawing Room, Conservatory, &c. Made throughout of Stout Metal.

TESTIMONIALS.

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Gentlemen,—I have great pleasure in testifying to their good action and general usefulness, as well as ornament, for either private houses or public aquaria.

Faithfully yours,

JOHN T. CARRINGTON, Naturalist.

Messrs. Kessell and Son.

Freemasons' Tavern, W.C.

Gentlemen,—I am exceedingly pleased with the Fountain Aquaria and Fern Stand —it works admirably.

Yours truly,

ALFRED BEST, Proprietor.

Messrs. Kessell and Son.



FOUNTAIN & FERN OR FLOWER STAND.

Price £10 10s. & £1

	Height.	Diam.
No. 1.	3ft. 2in.	20in.
No. 2.	3ft. 6in.	24in.

Each Fountain is supplied with 3 Jets, to throw 1, 3 and 5 Sprays of Water.

Other Ornamental Jets may be used.

No. 1 Size Fountain will play 4 to 6 hours. No. 2 Size will play 6 to 9 hours.

Prices and Particulars of Table Fountains may be had on application.

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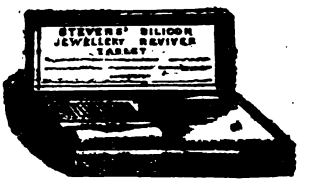
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THIS UNRIVALLED POLISH

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Is not a manufactured article, but a very remarkable natural production, the best substance known for Cleaning and Polishing Gold, Silver, and Jewels without the least injury, and will prevent pearls becoming discoloured.

Sold in a handsome little box, with Brush, Leather, Directions for Use, an Analysis, and numerous Testimonials, price 1s.

A large size, containing also a Ring Cleaning Stick, and one for cleaning Studs and Buttons, price 2s.

The SILICON is also sold in Powder, for Plate Cleaning, at 6d. and 1s. per box, and in canisters at 2s. 6d.

To be had through all Chemists, Fancy Goods Dealers, Jewellers, Brush Shops, and Ironmongers, throughout the kingdom.
Wholesale of all London Fancy Warehouses and Wholesale Druggists, and of the Proprietor, in bulk, rough, or in powder.

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Handsome English Gold Frames,

CHASTE DESIGN.



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SUITABLE FOR DINING ROOM, DRAWING ROOM, BOUDOIR, etc.

WITH THREE-LIGHT BRACKETS AT BOTTOM AND BRILLIANT PLATE GLASS.

TESTIMONIALS.

"The MIRRORS arrived safely, and are quite equal to my expectations."
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GEO. REES, 115, Strand.

And 41, 42, 43, RUSSELL STREET,
Covent Garden, London.

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SIX LARGE ENGRAVINGS

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FROM THE MOST CELEBRATED ARTISTS,

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Two Sets Sent Carriage Free.

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ESTABLISHED QUARTER OF A CENTURY

SPRATTS PATENT

Meat "Fibrine" Vegetable

DOG CAKES

(WITH BEETROOT).

THE LATEST IMPROVEMENT.

USED IN THE ROYAL KENNELS.

Royal Kennels, Ascot, April 2, 1882.

Dear Sirs,—Your Meat Biscuits containing Beetroot are not to be equalled.—FRANK GOODALL.

These Biscuits, made according to our Improved Patent, contain Beetroot as vegetable matter in addition to the other highly nutritious ingredients used in the manufacture of our Patent Meat "Fibrine" Dog Cakes, which, for the last twenty years, have had such a world-wide reputation.

The NUTRIENT and ANTI-SCORBUTIC properties of Beetroot are unrivalled, and it is the only vegetable that retains its virtues unimpaired under the great heat required in biscuit baking.

BEWARE OF WORTHLESS IMITATIONS!!!

Made of unsound and cheap ingredients, thus enabling the makers to sell them to the trade at a low price, so that the dealers get a better profit than by selling ours. These imitations are supplied by some tradesmen even when asked for ours, and for the protection of honest traders we shall feel obliged if our customers will kindly notify us whenever these frauds are perpetrated on them.

Please see that every Cake is stamped "Spratts Patent" and a "X."

PREPARED PUPPY FOOD,

Highly Recommended by the *Field*.

Rears Puppies from birth; can also be given to Pups whose mothers are bad milkers. 3s. per tin.

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Or **PEARL DENTIFRICE** is of inestimable value in preserving and beautifying the teeth, strengthening the gums, and giving a pleasant fragrance to the breath; it eradicates tartar from the teeth, prevents and arrests decay, and polishes and preserves the enamel, to which it imparts a pearl-like whiteness. Its unprecedented success for more than half a century shows the universal favour in which it is held, while the fact of its being entirely free from any acid or mineral ingredients constitutes it the safest and purest tooth powder ever used. To prevent fraud the genuine Odonto has a 3d. Government stamp on the box. Ask for Rowland's Odonto.

ROWLANDS' MACASSAR OIL

Is universally in high repute for its unprecedented success during the last 80 years in promoting the growth, restoring, improving, and beautifying the human hair. It prevents hair from falling off or turning grey, strengthens weak hair, cleanses it from scurf and dandriff, and makes it beautifully soft, pliable, and glossy. For children it is especially recommended, as forming the basis of a beautiful head of hair, while its introduction into the nursery of Royalty is a sufficient proof of its merits. Sold in usual four sizes.

ROWLANDS' KALYDOR,

An Eastern botanical preparation, perfectly free from all mineral or metallic admixture. It is distinguished for its extremely bland, purifying, and soothing effects on the skin; while by its action on the pores and minute secretory vessels, it promotes a healthy tone, allays every tendency to inflammation, and thus effectually dissipates all redness, tan, pimples, spots, freckles, discolourations, and other cutaneous visitations. The radiant bloom it imparts to the cheek, the softness and delicacy which it induces of the hands and arms, its capability of soothing irritation, and removing cutaneous defects, render it indispensable to every toilet. Gentlemen after shaving will find it renders the skin soft, smooth, and pleasant. Of all Chemists, at 4s. 6d. Avoid cheap spurious imitations. Sold by all dealers in perfumery.

Why many Persons Permanently Submit



to the vexatious and unsightly appearance of



"For every defect of Nature Art offers a remedy."

GREY HAIR

Rather than attempt to Restore it.

1st.—Because the old fashioned and objectionable Hair Dyes dry up and spoil the Hair.
2nd.—Because the majority of "Hair Restorers" bring the users into ridicule by producing only a sickly yellow tint or dirty greenish stain, instead of a proper colour.

The following Testimonials (of many hundreds received) declare the value of

LATREILLE'S HYPERION HAIR RESTORER

As positively restoring grey or white hair to the REALLY NATURAL colour, gloss, softness, luxuriance, and beauty of youth; it so perfectly accomplishes its work and fulfils its promise, that in brilliant sunshine, or under glaring gaslight, the user can alike defy detection in ever having been grey, or used a remedy, while as a nourisher and strengthener of weak hair it has no equal.

Price 3s. 6d., sent in return for Stamps or Post Office Order, by the Proprietors,
LATREILLE & CO., Walworth, London, or may be had of Chemists;
But it is strongly advised that anything else, offered from interested motives, be resolutely refused, as Latreille's Hyperion NEVER DISAPPOINTS. All Chemists can readily procure through wholesale houses, if they have it not themselves in stock.

SPECIMEN TESTIMONIALS.

20, Royal George-street, Stockport,
February 26, 1880.

DEAR SIR,—My hair went white through trouble and sickness, but one bottle of your Hyperion Hair Restorer brought it back to a splendid brown, as nice as it was in my young days. I am now forty years old, and all my friends wonder to see me restored from white to brown. You can make what use you like of this. Yours truly,
(Mrs.) MARIA WORTHINGTON.

132, High-street, Stourbridge, May 16, 1878.

SIR,—I find your Hyperion Hair Restorer is a first-class and really genuine article, and is well worth the money. After using it thrice, my hair began to turn the natural colour whereas before it was quite grey; it also keeps the hair from falling off, and I shall always recommend it to every one I know. You are at liberty to publish this if you choose. Yours truly, (Mrs.) M. DAVIS.

Thirsk, Yorks, January 26, 1876.

DEAR SIR,—I use your Hyperion Hair Restorer, and find it everything which has been said in its favour. I am, dear Sir, yours truly, T. COATES.

Portchester, near Fareham, Hants, Oct. 16, 1875.

SIR,—Please send me another bottle of your Hyperion Hair Restorer; it is better than any other restorer I have tried. Yours faithfully,
(Mrs.) C. CHRISTIE.

High-street, Cosham, Wilts,
December 2, 1874.

DEAR SIR,—I enclose stamps for another bottle of your Hyperion Hair Restorer; its clean qualities are sufficient to recommend it anywhere.
Yours respectfully, E. MAYNARD.

St. Heliers, Jersey,
August 1, 1873.

SIR,—Please send me another bottle of your Hyperion Hair Restorer; I bear willing testimony to its being very pleasant to use, both as to cleanliness and absence of disagreeable smell.
Yours truly, F. DE LUSIGNAN.

2, Fir-street, Sydenham,
July 15, 1873.

DEAR SIR,—I am most happy to tell you that I have reason to commend your excellent Hyperion Hair Restorer, as it has already turned the grey hair of a person fifty-seven years old to its natural colour.
Yours respectfully,
T. WRATHORE.

38, Dewsbury-road, Leeds,
May 22, 1873.

DEAR SIR,—I want half-a-dozen more bottles of your Hyperion Hair Restorer, some for friends and the remainder for myself; it is the best restorer of grey hair to its natural colour.
Yours truly, JAMES DAWSON.

***** Be careful to ask for Latreille's Hyperion Hair Restorer, as the manufacturer is also proprietor of Latreille's Excelsior Lotion, which is a separate preparation, of universal repute for 20 years past, as a Producer of Hair.**

LUXURIANT AND BEAUTIFUL HAIR.





NOTHING EVER INTRODUCED IS FOUND TO EQUAL

LATREILLE'S

EXCELSIOR LOTION

Celebrated among all classes of Society all over the World as THE ONLY REAL PRODUCER of

Whiskers & Moustachios,

AND

CURER OF BALDNESS.

Price 2s. 6d. per Bottle.

Can be had of any Chemist, through BARCLAY, SANGER, NEWBERY, EDWARDS, SUTTON, THOMPSON, HOVENDEN, MAW & Co., or any other Wholesale Chemist, or direct from the Proprietors,

LATREILLE & Co., WALWORTH, LONDON, S.E.,

On remitting Post Office Order or Stamps.

CAUTION.—*Be careful to ask for Latreille's "Excelsior Lotion," and refuse anything else that may be offered, as the enormous success, extending over twenty years, has led to many useless imitations, which can only disappoint. The title* "EXCELSIOR LOTION" *is a registered Trade Mark, to copy which will incur criminal prosecution.*

DR. NICHOLS'
FOOD OF HEALTH

8D. PER LB. PACKET.

Invaluable for INDIGESTION and CONSTIPATION.

IN THE FORM OF

PORRIDGE, BLANCMANGE, PUDDINGS, &c.

OF CHEMISTS AND GROCERS.

DR. NICHOLS'
SANITARY SOAP

FOR THE TOILET,
BATH,
NURSERY,
SICK ROOM.

6D.
PER TABLET.

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BRILL'S SEA SALT

SHOULD BE USED DAILY
IN HOT, COLD, OR TEPID WATER.

1½d. per Bath.

PREPARED WITHOUT TROUBLE.

INVALUABLE IN THE NURSERY.

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Registered Work Benches

FOR MECHANICS AND AMATEURS.

Full Size Bench, 6ft. by 1ft. 10in. by 3in. top, made of best white deal, complete as above, with Patent Bench Knife fitted, **£3 12s.**



Amateur's Size. Top made of best white deal, complete as above, with Patent Bench Knife fitted, 4ft. 6in. by 1ft. 6in. **£3 3s.**

THE Advantages of this Bench are, that being on Metal Supports and firmly bolted, it cannot rack and get loose at the joints, thus overcoming a long-felt difficulty where wood standards are used. They are also fitted with the "Standard" Instantaneous Grip Vice, which is admitted by all to be the most perfect, and a real pleasure to work with.

The top is bolted through thickness, as shown on front of bench, with iron bolts, so as to prevent warping.

The Screw Rising Wood Stop can be raised or lowered any required distance.

The Patent Bench Knife will be found useful for holding the wood during the process of planing or rebating, and it can be removed instantly to any required distance, or taken off the bench if desired.

Registered Mitre Machines for Picture-frame Makers	15/- each.
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Price List, Post Free. *Complete Catalogue, Two Stamps.*

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MRS. JAMES'S DEPILATORY

INSTANTLY AND PERMANENTLY

REMOVES SUPERFLUOUS HAIRS

FROM THE

FACE, NECK, OR ARMS, WITHOUT INJURY TO THE SKIN.

NO LADY SHOULD BE WITHOUT IT.

To be had of most Chemists, or a box of it sent (with directions for use) free from observation, Post Free, for 15 Stamps.

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MACDONALD'S AFRICAN

INSECT EXTERMINATOR

Is the Best, for it does not, like others, only stupify, but it positively

KILLS ALL INSECTS.





In Decorated Crystallized Boxes, retail at **3d., 6d., and 1s.,** of Chemists, &c.

TO BE OBTAINED THROUGH WHOLESALE DRUGGISTS AND AT THE

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PRESS OPINIONS.—"We have tried the effect of MACDONALD'S AFRICAN INSECT EXTERMINATOR once only, on black beetles, with the gratifying result of the total annihilation of an entire army whose manœuvres have considerably interfered with the natural course of events in our kitchen. We confidently recommend it, and believe it to be by far and away the best preparation in the world for destroying insects. It is perfectly harmless to all animal life."—*Christian Chronicle*, August 17th, 1882.

"Of the many exhibits at the Domestic Exhibition at the Agricultural Hall (Sept. 1882), the head of every well-ordered household will give the highest place in his or her estimate of what is domestically useful to MACDONALD'S AFRICAN INSECT EXTERMINATOR. Do what you will in a house, the Philistines may be upon you in the shape of the tormenting insect tribe. Therefore it is gratifying to come across an efficient remedy—one that kills, and not merely stupifies. Nothing is left to chance, no redivivus, but the business is done straight away. Further, the tin in which it is packed is almost as ornamental as its contents are useful, and that is saying a very great deal indeed."—*Civilian*, 2nd September, 1882.

"We have given MACDONALD'S EXTERMINATOR a fair trial at our offices, where unfortunately black-beetles abound, and the result was most satisfactory, as the dead insects were swept up in numbers after an application of it. It is a powder which is scattered in the haunts of the insects. Housekeepers will be glad to know of it."—*The Bazaar, the Exchange and Mart*, July 24th, 1882.

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Testimonials from Private Parties, Hotel Keepers, &c., are too numerous to publish.